

The Mining Journal

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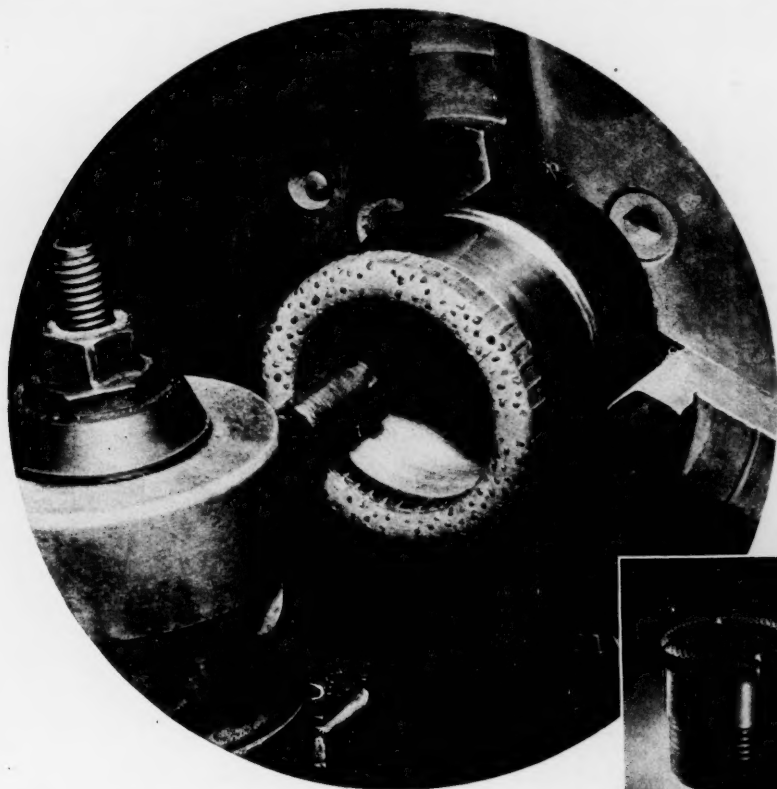
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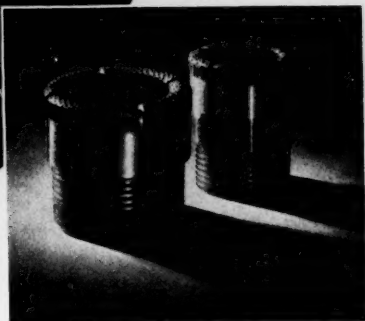


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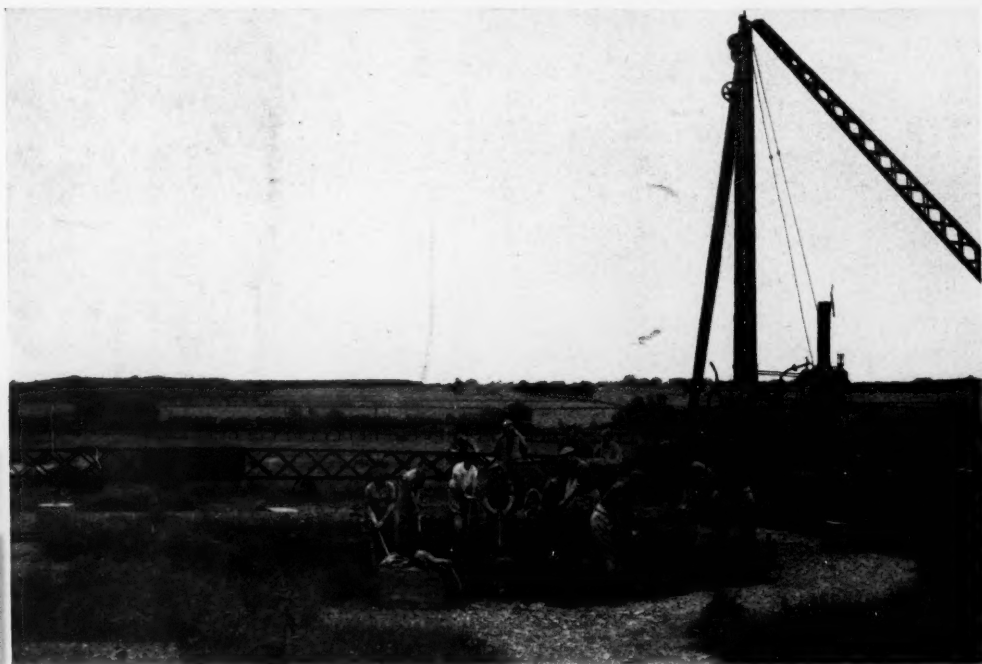
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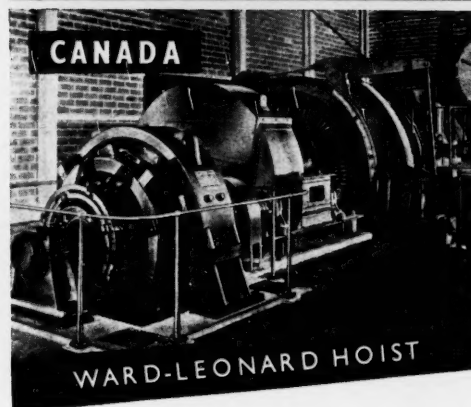
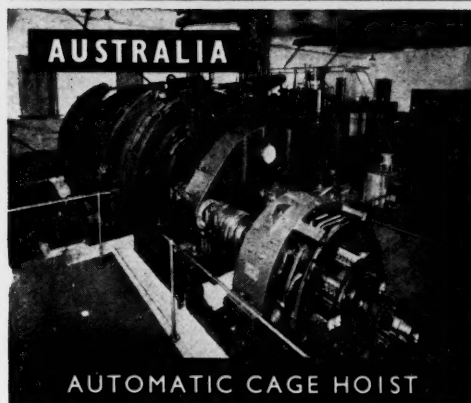
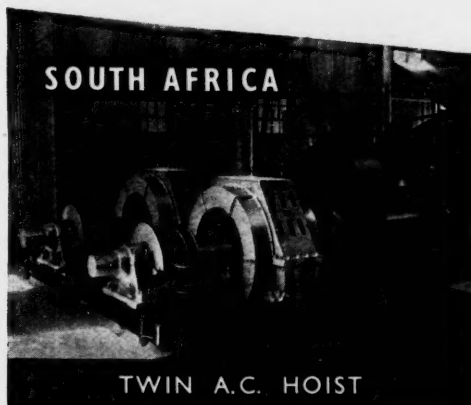
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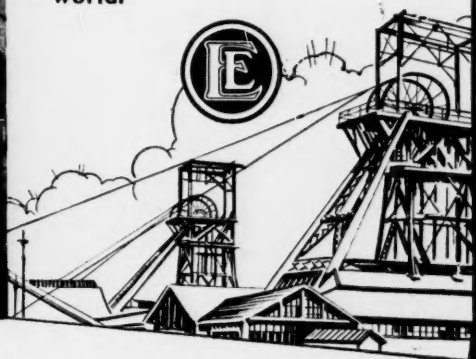
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THIS WEEK'S FEATURES

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NOTES AND COMMENTS

Raw Materials and the Cabinet Reconstruction

However satisfactory the result of Tuesday's debate on raw materials and production in relation to the defence programme may have been to the Government, it can hardly be regarded with satisfaction by British industry and the country generally. In view of the many inconsequences and contradictions which political events of the past fortnight have presented, we have been offered the spectacle of the resignation of two leading members of the Cabinet—Mr. Aneurin Bevan, Minister of Labour, and Mr. Harold Wilson, President of the Board of Trade, and of the Parliamentary Secretary to the Ministry of Supply, and their replacement by Mr. Robens and Sir Hartley Shawcross at the two major Ministries, besides the creation of an entirely new Department of Co-ordination under Mr. Stokes—on grounds enlarged from an original objection to some charges on lenses and dentures under the National Health Act to the wider charge that the proposed Budget expenditure on national defence was greatly exaggerated because the necessary raw materials to execute it could not be obtained. Yet this was followed by all three Ministers voting with the Government on the ground that though they did not believe that the necessary raw materials and machine-tools could be secured, they were content to wait and see and hope for the best. Surely, if this was their conviction when the Budget was being framed and they did not then resign, we might have been spared the shock to public confidence which their subsequent disclosures created.

However, we are concerned with the difficulties of the raw material position rather than with internal differences in the Cabinet. What our readers will probably be most interested in, is how far the changes of organization are likely to improve the serious inadequacy of supplies now being felt and the greater or less amount of unemployment which may result from the curtailment of raw material for industrial activity. The Minister of Supply, Mr. Strauss, has not resigned and his position is that while it is too early to say that our raw material position for defence and a central civil production is secure, it would be unjustifiable to say that it is not. Incidentally, the Minister avoided answering Mr. Eden's challenge to give even percentage figures of the relative position 18, 12 and 6 months ago, the natural inference being that these would not be reassuring.

Considerable curiosity and anxiety was expressed by

various members as to the lines of demarcation between the new Co-ordination Department and the Board of Trade and the Ministry of Supply. Though until the Co-ordination organization gets into gear the pre-existing arrangement continues.

Mr. Strauss stated that the new Department's duty will be to see that the country has adequate supplies of raw materials and when shortages are unavoidable to supervise distribution arrangements; but the responsibility for detailed allocation will remain with the departments primarily concerned. The Department of Co-ordination will, in some cases, be responsible also for the primary stages in the processing of the material and in other cases it will deal only with their procurement. The Board of Trade will be responsible for china clay and the Ministry of Supply for steel, but the new Department will become responsible for the whole of the work of the present non-ferrous metals division of the Ministry of Supply, though not over materials now controlled by the Ministry of Fuel and the Ministry of Works. This highly complex rearrangement has been characterized in some trade quarters as another instance of the old saying, *plus ça change plus c'est la même chose*.

Moreover, Mr. Attlee stated on Monday that economic co-ordination within the field of Government planning generally is the responsibility of the Chancellor of the Exchequer and that there would be yet another piece of machinery to determine allocation. So there is clearly more work for the planners!

Mr. Strauss on Monday made a general statement on supplies of raw material required for steel production, but in the main he told us nothing that has not already been noted in these columns. He said that in the last quarter of 1950 stocks of imported iron ore, pig iron and scrap had been reduced by the equivalent in steel ingots of over 400,000 tons, and that in the quarter just ended they had been further reduced by 500,000 tons, and that stocks were at a dangerously low level. Consequently steel production this year will be less than in 1950. The shipping difficulty, hampering shipment not only of iron, but manganese and other materials, was, he said, getting easier. There was not so much scrap about as last year and in particular we shall not get so much from Germany as he thought we ought to have, but German scrap prices were much higher this year which may perhaps account for their reluctance.

The Finance Bill

The Finance Bill published on April 26 last contained provisions directly affecting the transfer of control board of companies registered in the United Kingdom.

Under Section 32 dealing with domicile, the Bill forbids a U.K. resident company: (1) to emigrate, (2) transfer any part of its trade or business to a non-resident, (3) permit any controlled but non-resident business to create or issue new capital or to transfer shares or debentures of a controlled non-resident company, in any instance where the transactions may result, directly or indirectly, in the avoidance of liability to U.K. income tax or profits tax.

Infringement by a company resident in the U.K. of these provisions involves a fine up to a maximum amount of three times the total income and profits tax paid or payable by it for the last three years of assessment, or £10,000, whichever is the greater. Individuals guilty of the same offence are liable to a fine not exceeding £10,000, or imprisonment up to two years, or both.

Specific Treasury consent may be given to any transaction falling within these provisions. Under the Exchange Control Act the Treasury was already invested with some of these powers. Under this Bill their powers are vastly extended.

In the absence of any test case or official statement as to whether or not the provisions will be interpreted literally, it is difficult to assess what the likely consequences will be of these superficially ominous provisions. *Prima facie* it appears that it may have the effect of keeping legal control of overseas companies in this country assuming, of course, that these enterprises are already domiciled here. But there is no escaping the hard fact that such legislation can, if it becomes law, only have the result of finally discouraging any prospective overseas mining companies from setting up house in this country. Thus, as the existing mines are gradually exhausted the decline of London, as the world centre of mining finance seems inevitable.

Sweden to Open Up Pyrites Deposit

The Swedish Board of Trade has recently asked the Government to request the Riksdag to appropriate 8,000,000 kronor to cover the initial cost of opening the Rudjebäck pyrite-zinc-copper mine. The Board estimated that this sum is required for the first stage of development of the property which is expected to take two years. A request to appropriate a further 4,000,000 kronor will be made later in order to complete development of the property during a second two-year period. The Rudjebäck mine, which is on Government land and which has not been worked since the deposit was discovered some ten years ago, forms part of the Government-owned Adak minefield, located north of Umeå, Province of Vasterbotten, near the head of the Gulf of Bothnia.

This decision of the Board of Trade was reached after the Swedish Geological Survey had explored the structure and physical characteristics of the ore body, and samples had been taken for metallurgical testing. It was found that this ore body, the top of which is 100 metres below the surface, consists of about 3,300,000 tonnes of crude ore, containing an average of 41.9 per cent sulphur, 4.25 per cent zinc, and 1 per cent copper.

It is believed that it will be possible to extract about 90 per cent—nearly 3,000,000 tonnes—of the total ore deposit. Therefore, it should be possible to produce 106,000 tonnes of copper concentrates, containing 21,000 tonnes (about 20 per cent) copper, approximately 165,000 tonnes of zinc concentrates, containing 86,000 tonnes (about 52 per cent) zinc, and about 1,920,000 tonnes of pyrites, containing 960,000 tonnes of sulphur.

However, operation of the Rudjebäck mine for sulphur alone would not be commercially profitable if copper and zinc were not obtained at the same time, in spite of the fact that the average grade of the copper-zinc ore is not particularly high. The Board favours the development of the property partly through a desire to keep intact the buildings and equipment currently used at the Adak and Lindsöld copper mines, about four miles distant, when they will be exhausted around 1956, and to support the small mining community in that area. Should the Rudjebäck mine be opened as proposed, it will be custom-operated by the Boliden Mining Co., as is now the case with the two other mines in the Adak field.

Indian Diamond Developments

Prospecting and mining of the Panna Diamond field has been restarted on a large scale with modern machinery and equipment. A private limited company, the Panna Diamond Mining Syndicate, has been formed with an initial capital of Rs.10,000,000, to be increased to Rs.25,000,000 in the near future. This company has taken over the Panna Mining Syndicate, which was engaged in mining on a small scale since 1939. Moreover, according to an Indian correspondent, it proposes to prospect and develop the Golconda and Vajrakarur diamond fields at a later date.

Diamond mining in Panna was done hitherto by the local people, employing crude and primitive methods; aggregate annual output amounted to about 2,000 tons of ore and crude diamonds valued Rs.3 to 4 lakhs were produced. The new syndicate has erected machinery valued over Rs.5,000,000, comprising crushers, washing pans, grease tables, vibrating screens, designed for a daily output of 250 tons of ore, conservatively estimated to yield 0.25 carats of diamond per ton of ore.

As a result of restrictions on diamond imports there is a very good home market for Indian diamonds. At present, the syndicate auctions uncut stones in lots, but it is worthy of note that the new company proposes to acquire Diamond Industries Ltd., a company which is now engaged exclusively in cutting and polishing diamonds—with its staff of technicians trained by Belgian experts, in order to do the cutting and polishing of the crude diamonds themselves, thus the syndicate will be in a position to market finished diamonds.

Mining Courses for Non-technical Staff

In our note last week regarding the Royal School of Mines' successful venture in holding a course on mining and economics for the non-technical personnel of mining companies, we suffered one of those typographical errors which, with the perversity of print, usually seems to occur on operative words. We stated that it seemed clear "that more than one repeat course could be filled from among other personnel from the same participating companies, quite apart from the possibility of *excluding* members of metal dealing and stockbroking firms." The word should, of course, have been *including*, as we believe that no representatives of these firms participated in this first series of lectures. It is, in fact, our contention that on any subsequent course members of these firms which work so intimately with the mining industry, might usefully be invited to participate. Not only could the course be helpful to those who are selected to attend, but if the course were to provide periods for informal discussion, much could be gained by interchange of experience between those with practical experience of the workings of the Metal Exchange and the Stock Exchange with those from the mining houses.

National Coal Board's Borrowing Powers Raised to £300,000,000

(From Our Parliamentary Correspondent)

The main provision of the Coal Industry Bill, discussed on second reading in the House of Commons on Monday, is that the borrowing powers of the National Coal Board are extended from £150,000,000 to £300,000,000, and that it may borrow from the Minister of Fuel and Power in order to meet a temporary revenue up to £20,000,000 instead of £10,000,000 in deficiency.

Mr. Noel-Baker, the Minister of Fuel and Power, explained that the Reid Report of 1945 started from the basic proposition that coal mining was an extractive industry working exhaustive reserves; that coal was a wasting asset and that every decade it became harder and more expensive to get the same amount of coal.

The Reid Report had recommended drastic and far-reaching technical changes in the layout of the mines, in mechanization at the face, in the underground haulage and winding systems, and in the surface plant. In other words, it foreshadowed the National Plan which the Coal Board had prepared, and laid down the lines of technical development on which the National Plan should be based. The Coal Board, therefore, began their task where the Reid Report left off.

OUTPUT TO BE 240,000,000 TONS

The Minister went on to say that the Board hoped, if the plan was carried out, to increase annual output to 240,000,000 tons, or more by 1960 or 1965; and, other things being equal, to reduce the cost by 7s. per ton.

But to do this they estimated that they must invest about £635,000,000 in the next ten or fifteen years, of which £520,000,000 in the pits and £115,000,000 on ancillaries—coke ovens, briquetting plants, and the like. About £350,000,000 would be required over the next 15 years simply to keep output where it was. A great part of this vast outlay would be financed from depreciation funds, and they had pursued a cautious policy over depreciation. Last year, about 1s. 8d. per ton was laid aside and it was calculated that that might be about twice as much as the owners of the colliery companies used to provide.

After giving details of the financial implications of the Board's policy, the Minister remarked that the Board had to pay much higher prices for new materials and equipment. Could the Board hope that, as the National Plan matured, they could get the coal at lower cost? On the experience up to date, he believed that they could. At a pit at Cwmillery, South Wales, the Board had mechanized the face, installed pneumatic stowing, and electrical equipment at the faces. As a result, the annual output of the pit rose from 100,000 tons in the first half of 1947 to 150,000 in the first half of 1950 and output per manshift went up by 8.8 cwt. Costs, at the 1947 level of wages and prices, fell by 14s. 11d. per ton. At Radford, in the East Midlands, where a *changeover from hand-getting to Longwall* conveyor faces and a re-organization of loading points and boiler plant were carried out, output increased from 90,000 to 270,000 tons. The O.M.S. went up by 16.1 cwt., and costs at the 1947 level went down by 4s. a ton.

In a selection of 60 pits, where the workings were re-organized, and new machinery and equipment were installed, the Board invested £7,500,000. As a result, in those three years, annual output increased by 6,000,000 tons and the average increase in O.M.S. was 7.5 cwt. The average reduction in costs (at the old level of wages and

prices) was 6s. 8d. "It is true," admitted the Minister, "that these 60 pits were all small land medium sized undertakings, where the results were likely to be quick and good. But they show what we may hope for when the larger and longer term schemes come through."

AN IMPRESSIVE PROGRESS REPORT

Taking the pits as a whole the Minister stated that the Board had increased the length of conveyor belts from 9,000,000 ft. at vesting date to 17,750,000 ft. in December, 1950. The number of underground haulage locomotives increased from 90 at vesting date to 375 in December, 1950—and one locomotive might save the labour of 30 men. They had nearly doubled the quantity of coal won by power-loaders from 4,000,000 tons to 7,650,000 tons and put in skip-winding in about a dozen major pits. Many thousands of yards of new level roadways had been completed and many more thousands of yards were still in hand. Of course, there had also been big new developments which were still in the experimental stage.

Mr. Noel-Baker added that the Bolsover Plan, in what they called continuous mining, was doing well. Those engaged in it assured him that already they had in some weeks raised the O.M.S. from 33 cwt. to 50 cwt. When power-loaders are installed as they would be this year, they would raise O.M.S. from 33 cwt. to over 80 cwt. He thought that one machine of the new all-British type of cutter-loader, the Samson Stripper—might come to be thought of as the Dakota of cutter-loaders. At Clipston, it was producing 840 tons a day with an O.M.S., at the face, of over 12 tons.

"As we press vigorously forward with this investment," the Minister concluded, "we hope to make our mines, relatively to their age and to their geological conditions, the safest, the most productive, and with the best spirit of co-operation in the world."

Col. Clark (C., East Grinstead), said that last year he spent some time examining the work which had to be done in the hydro-electric industry where a great deal of tunnelling was going on and it occurred to him that some of the interference which took place in the mines at present through men having to be taken off coal winning in order to do development work might be avoided, and development expedited, if it was done by outside contractors.

"WE HAVE NOT YET SEEN THE BILL . . ."

"I think we should be unwise to put too much reliance on this scheme for these 3,000,000 extra tons we have been getting recently," said Col. Lancaster (C., South Fylde). "We have not yet seen the bill for that. It is the result of Saturday morning working. I have never been very keen on that, and I am sure that the Minister knows full well that it is a very expensive way of obtaining additional coal. We do not want to see that going on any longer than is really necessary. In fact, we shall not, of course, see much of Saturday working until next October."

Replying to the debate, Mr. Noel-Baker said that coal production had not yet been held up for want of materials, or of steel. He was resolved, as far as he was concerned, that it should not be so. They had got to have this big investment, they had got to make it real and speed it up, if they could. Between the two world wars, there had been under investment in coal, which had to be made good.

Minerals and Mining at the Festival

To present a comprehensive impression of the British people and their achievements within the relatively small space available at the South Bank Exhibition has necessitated very careful planning. With the assistance of expert advisory panels, the organizers have aimed at providing a consecutive panorama of educational value, rather than a series of unco-ordinated exhibits selected for their own intrinsic merits. The theme is developed in two separate sequences. The "downstream" sequence is devoted to the people themselves, while the "upstream" sequence describes the land of Britain, its resources, the ways in which they have been developed by the enterprise of the British people, and the methods of agriculture, mining and processing currently employed. It is evident that such a vast picture could only be sketched in bold outlines, with rigorous exclusion of all details, however interesting, which are not essential to the development of the main theme.

MINERALS OF THE ISLAND PAVILION

The "upstream" sequence originates logically in The Land of Britain Pavilion, where a series of moving models will show how the geological formation of the British Isles was brought about. These models will illustrate what the country looked like during such important periods of geological history as the time when the coalfields were laid down. There followed two pavilions which are concerned with the surface of the land and depict respectively agriculture and the natural scene. The visitor then passes on to the Minerals of the Island Pavilion, where he sees how Britain's mineral wealth is won and used. The sequence then leads him logically to the Power and Production Pavilion, to be shown how these raw materials are used in industry.

Since coal is the most important of all Britain's raw material resources, pride of place in the Minerals of the Island Pavilion is devoted to its formation and extraction. The historical aspects of coal mining are illustrated by five examples, ranging from prehistoric man picking up black stones from outcrops, to a modern mine. Emphasis is laid on the ever-increasing depth at which coal is being won.

Among the most interesting exhibits in this section, which has been planned in close co-operation with the National Coal Board, is what might be termed a coal mine "with the lid off." This comprises a 10 ft. working model of an up-to-date mine, as it would appear if the 3,000 ft. or so of over-burden could be removed. Visitors will be able to study the location of the shafts and the ventilation system, and to see the relation of each part of a mine to the whole. There will also be various murals of a mining village as it would be seen from an aeroplane coming in to land. A conveyor transporting lumps of coal will be seen in operation, and behind this model will be six panels, each devoted to a different aspect of coal mining, such as safety, lighting, etc. A small display illustrating the grading of coal has also been provided.

REPLICA OF COAL MINE

Yet another outstanding exhibit is a small replica of a coal mine, which will be used as a setting for a selection of typical mining machinery. There will always be two miners on duty to demonstrate these machines, which will be shown in that section of the mine where they are normally used. They include a cutter loader, a Sampson stripper, a pneumatic drill, and a small Diesel engine drawing a mine car along a short length of track. Inset into one point of the coal face will be a display featuring photo-

micrographs of the structure of coal, in which its attractive colours can be seen. In one photomicrograph the bark of a tree can actually be discerned. This work on the structure of coal is essentially British and had been accorded relatively little attention in other countries.

The coal exhibits in this Pavilion are completed by two showcases, one displaying miners' equipment and the other miners' clothing.

Having been given a remarkably comprehensive impression of coal mining within a very limited space, the visitor passes on from coal to its products. These are represented, firstly, by two models illustrating respectively a section of a coke oven and the layout of a modern coke works, and, secondly, by featuring some of the numerous chemical by-products obtained from coal.

A panel of eminent metallurgists has co-operated in the selection of topics for the rather smaller section which is devoted to metals. Here prominence is given to iron and steel, partly because of their importance and also because the British contribution in this field has been so great. After very careful consideration, four men were selected as outstanding among the many British people who have contributed to the progress of iron and steel metallurgy. The development of the blast furnace by the Shropshireman Darby, the work in Britain by Bessemer and Siemens which made cheap steel possible, and the invention of manganese steel by Hadfield in Sheffield, will be portrayed. Each of these men will be represented by a portrait and by a model illustrating the development most closely associated with his name.

PIG IRON PRODUCTION

British pig iron production is exemplified by a model blast furnace, shown in conjunction with a display illustrating the raw materials comprising the charge. There are also three working models showing an ore crushing and screening plant, the interior of a blast furnace, and the interior of an open hearth furnace. Dominating these exhibits will be a large integrated mural, showing the various methods of making iron and steel.

There is a long gallery in this Pavilion, which is lined with photographs, each about 10 ft. x 8 ft., depicting various aspects of the production of iron and steel. These pictures have been chosen for their dramatic effect, which is enhanced by the use of ultra-violet lighting and fluorescent pigments.

Out of the numerous varieties of iron and steel produced in Britain, seven different alloys have been selected for a display based on the theme that the metal can be a tailor-made to the job.

Two panels have been allocated to non-ferrous metals. Due to space limitations, it has not been possible to depict the historical aspects of copper extraction. The organizers have preferred to stress contemporary contributions to non-ferrous metallurgy by showing examples of modern alloys and their uses. One panel is devoted to copper alloys and the other to aluminium alloys.

In order to give visitors a visual demonstration of the practical applications of various metals, four complex, but familiar products have been selected; namely, a Diesel engine, a diaphragm pump, a water heater and a washing machine. These have been sectioned and coloured to show where the various metals are located and the reasons for using each particular metal are explained.

In the centre of the pyramid-shaped Pavilion hangs a steel ladle. A spiral staircase with four platforms at various levels has been used to illustrate the raw materials on

which our chemical industries are based. It is pointed out that most of Britain's chemical products are derived from seven primary materials, namely, coal, sulphur, limestone, silicon, salt, air and water. Apart from sulphur, Britain has abundant resources of them all.

POWER AND PRODUCTION PAVILION

Having seen how coal is mined, how metals and alloys are produced, and the part played by indigenous materials in the development of the chemical industries, the visitor is now ready to be shown how steam and electricity obtained from coal are harnessed to other raw materials for the production of a wide variety of end products. This chapter of the story is told in the Power and Production

Pavilion, which is concerned with such aspects of British achievement as the generation and transmission of electric power, progress in illumination, metal processing and working, the structure and distribution of industry, research, etc. The main hall of this Pavilion contains a selection of modern machinery which will reflect the continuing inventiveness of British engineers. The machines will all be of the latest type and some will be on view for the first time. All of them will be working. In a display section devoted to "Craftsmanship in Industry," several British craftsmen will demonstrate their skills. At the end of the Pavilion will be a showroom, where typical current products of British craftsmen and machine manufacturers will be displayed.

Cobalt Ore Developments in the U.S.A. and Canada

By the end of 1952 the United States will, according to an article by Mr. John V. Beall in the January, 1951, issue of *Mining Engineering*, have 4,250,000 lb. of cobalt annually from domestic and Canadian ores. U.S. consumption of cobalt immediately prior to the present emergency was 8,000,000 lb. annually, 90 per cent of which were imported from the Belgian Congo. New sources of cobalt being developed are ore bodies near Salmon, Idaho, those of the National Lead Co., at Fredericktown, Missouri, and the Cobalt, Ontario, ore bodies owned by various Canadian interests. It has become possible to exploit these sources commercially because of the development of a new process to recover cobalt from complex concentrates containing arsenic or nickel.

It may be recalled that on November 21, 1950, the National Production Authority issued an order limiting consumption of cobalt to 30 per cent of previous usage by non-defence industries and by February, 1951, cobalt was restricted to defence order consumption.

The largest use of cobalt is for permanent magnets, which have many military and civilian uses, cobalt magnets being the most efficient permanent type magnets. In fact, where weight and space are vital, the cobalt-alloy magnet materials are indispensable. In instruments used in guided missiles, for instance, magnets must frequently be contained in an enclosure no more than 1 in. in diameter. In the extremely high performance Alnico alloy, cobalt is alloyed with nickel and aluminium.

Cobalt in tool steels improves cutting performances at high speeds and red heats. Cutting tools made of powdered tungsten carbide are bonded with cobalt to make an extremely efficient and heavy-duty cutting tool. From 3 to 20 per cent cobalt is required for this use.

REFRACTORY ALLOYS

The past decade has seen the development of the so-called refractory or high-temperature alloys, capable of maintaining strength at operating temperatures of 1,600°F. or over, and capable of resisting creep, wear, corrosion and erosion. Over 40 such alloys have been developed and at least 13 contain cobalt, ranging from 13 to 66 per cent. The alloys were designed for components of gas turbines, jet aircraft engines and turbo-superchargers. Vastly greater amounts of cobalt will be required by expansion of military requirements, but the impact of consumption for this work has not been fully realized.

The ceramic industry uses cobalt to provide the blue colour and cobalt oxide is used in frit or ground coats in porcelain enamelware because it enhances bonding at the

steel-enamel interface. Salts of cobalt are used as driers for paints and varnishes and cobalt is being used successfully to supplement pasture deficiencies in cattle raising.

At present, much of the cobalt consumed in the United States comes from one company in the Belgian Congo, which recovers the metal as a by-product of copper mining. The next biggest producer is the Rhokana Corporation in Northern Rhodesia, which ships all its production to the United Kingdom. The Economic Co-operation Administration is helping to increase output at Rhokana. It has made a contract to purchase 7,200 tonnes of cobalt ore from French Morocco, to be delivered by November, 1952. This ore will yield about 2,000,000 lb. of cobalt metal.

Supply of cobalt has usually exceeded the demand. This situation has held back the recovery of cobalt from cobalt-bearing ore bodies. Cobalt is usually a by-product of the mining of some other metal. In the United States, it has not been commercially possible to save the cobalt from these ores because of the complicated process of separating it from nickel or arsenic, which are frequently found with cobalt.

NEW U.S. RECOVERY PROCESS

The Chemical Construction Co., however, is reported to have worked out a new process which will recover the cobalt from ore bodies in the States of Idaho and Missouri, details of which will be announced this spring. A new cobalt refinery is being constructed near Salt Lake City, Utah, to treat the Idaho concentrates. The plant is expected to be in operation this year and will have an annual capacity of from 2,000,000 to 3,000,000 lb.

Missouri cobalt will be recovered from concentrates which have been saved from the mining of lead and zinc ores. It is expected that this source will yield 500,000 lb. annually.

It is proposed to recover cobalt from the famous old silver mines of Cobalt, Ontario. These mines produced large amounts of silver from 1900 to 1920, but have been dormant until recently, but the high price of silver, new discoveries and technological advances have caused many of the mines to be re-opened. In mining the silver, cobalt ores are developed, but much cobalt is also contained in the silver ores. This district will account for 750,000 lb. annually when the projected cobalt refinery is completed.

According to *Mineral Trade Notes*, issued by the U.S. Bureau of Mines, cobalt output in Canada in 1950 was estimated at 626,400 lb., valued at \$C.1,039,910, compared with 619,065 lb., valued at \$C.952,469 in 1949.

In 1950, cobalt was recovered from ores produced outside the Province of Ontario. The Eldorado Mining and Refining, Ltd., owned by the Canadian Government, recovered cobalt concentrates at Port Hope, Ontario, from pitchblende mined at Port Radium, Yukon Territory. The concentrates are shipped to the Deloro Mining & Refining, Ltd., for refining. It is interesting to note that Falconbridge Nickel Mines, Ltd., will not begin the separation of cobalt from the nickel-copper matte exported from Canada to the refinery at Kristiansand, Norway, until September, 1951.

It is revealed that the proposed expansion of the 15 ton monthly cobalt-recovery plant of the International Nickel Co., at Port Colborne, did not materialize last year because of unexpected delays in construction of an oxygen plant at Copper Cliff, which is essential to a change-over in process to flash smelting. Completion of the oxygen plant was expected in February, 1950. The entire output of cobalt oxide from Port Colborne is shipped to Mond Nickel, Ltd., in the United Kingdom, for electrolytic refining.

OUTPUT FROM THE COBALT AREA

Authoritative estimates of cobalt output from the Cobalt, Ontario, area, including Gowganda camp, are placed at 145,300 lb. of cobalt metal in 1950 and 156,000 to 162,000 lb. in 1951. Ore from this area is classed as silver ore or cobalt ore. Silver ores (cobbed ore or concentrate) contain over 500 oz. of silver per ton and 3 to 9 or 10 per cent cobalt. Cobalt ores contain less than 500 oz. of silver per ton and 8 or more per cent cobalt.

Silver Miller Mines, Ltd., began operation of a 50-ton concentrating mill about November 1, 1949, to treat high grade silver ore containing cobalt. The entire output of the mill is shipped as dried, bagged concentrate to Deloro Mining & Refining, Ltd., as silver ore. Deloro acts as sales agent for the silver recovered, but buys the cobalt outright, as distribution of refined cobalt is controlled by the Canadian Government. The concentrate from the Silver Miller Mines averages about 7 per cent cobalt. Over 60,000 lb. of cobalt was recovered from Silver Miller concentrates during the eight months' period ended June 30, 1950.

During the spring and summer of 1950 there was a further revival of activity at Cobalt, owing to the discovery of new veins adjacent to worked-over mines or at new levels. Cobalt Lode Silver Mines, Ltd., re-opened the Mileage 104 concentrating mill on November 19, 1950. This 100-ton daily capacity mill, inactive for many years, was acquired from Silanco Mining & Refining Co., Ltd., for \$C.65,000. In November, the mill operated at a rate of 50 tons daily, to be increased to 100 tons daily from January, 1951.

The Agaunico mine of Silanco Mining & Refining Co. is not operating. Cobalt Chemical & Refinery Co. was organized by Silanco in 1949. The company built a smelter, designed to treat concentrates from Silanco's Colonial Mill and Mileage 104, the latter since sold to Cobalt Lode Silver Mines, Ltd. In the spring of 1950, the Colonial mill produced concentrates for the smelter, but this operation was suspended when the smelter burned out in May, 1950. The smelting and roasting equipment was destroyed, but the chemical plant, especially the electrolytic furnace, is reported to need only re-wiring. Silanco has a stock of 150 tons of concentrates, and Cobalt Lode 135 tons, all old production from Agaunico, containing 10 per cent cobalt. Silanco has pending an application to the Export-Import Bank of Washington for a loan of \$U.S.2,000,000; one-half for reconstruction of the smelter and the balance for mining operations at Agaunico. If the loan is granted, complete processing of cobalt ore would be effected. The smelter could be rebuilt in six months and the mine could be in full operation in six weeks.

Increasing Steel Output in Brazil

(From Our Own Correspondent)

Teresopolis, April 23

Brazil produced 650,000 tons of steel last year, as against 86,000 tons in 1939. During the same period the requirements of national industries have increased from 378,300 to a minimum of 1,000,000 tons. Owing to the disturbed international situation, the Government is urging local mills to increase production in order to provide for a possible reduction of imports. The leaders of the industry point out, however, that the State-owned Central Brazil Railway is unable to handle their present requirements of ore from the centre of Minas Geraes, or to clear the produce of the factories, without heavy delay.

Volta Redonda is to proceed immediately with the second stage of its expansion programme, which aims at raising annual production of pig-iron, steel ingots and rolled-steel products to 750,000, 680,000 and 467,000 tons, respectively. The output of tinplate will be increased to 100,000 tons. The Export-Import Bank of Washington will advance \$U.S.25,000,000 to finance the necessary imports, and the company's capital is being increased by £10,000,000 to cover the cost of labour and materials to be acquired.

During 1950 the national steelworks at Volta Redonda, Companhia Siderurgica Nacional, made a net profit of £3,941,000, an increase of 39 per cent over 1949. The value of sales reached £22,631,000, or 22.6 per cent more than in 1949, rolled steel products accounting for 90.5 per cent of the total. Only 0.2 per cent of the output was exported, namely to Argentina, the remainder being sold on the home market.

Production figures in 1950 are given below, with the percentage increases over 1949 in parenthesis:

	tons	per cent
Coke	286,592	(55)
Pig iron.....	339,062	(76)
Steel ingots	420,188	(36)
Rollled steel products	287,168	(26)

Delayed supplies over the Central Brazil railway reduced output of pig iron by 51,000 tons and prevented the rolling mill from working to its full capacity of 375,000 tons. The original programme of work was completed in April, when the foundry began operating fully. By the end of the year production of foundry pieces reached 23,211 tons.

ITABIRA IRON MINES

The installations of the Companhia Vale do Rio Doce (which took over the ex-British Itabira mines and the Victoria-Minas Railway in 1942), for mining and crushing ore, and transporting it mechanically to the railway yards, will be completed in June this year, raising potential output to 1,500,000 tons annually. On the Victoria-Minas Railway train loads have been increased and carrying capacity raised to 100,000 tons monthly. Only a short section of the line remains to be dealt with. By September, 1950, ships were being loaded mechanically, directly from the depots, and 125,000 tons of ore were shipped during that month. During 1950 the mines produced 732,765 tons of ore and exported 721,765 tons, or 52 per cent more than in 1949. Exports from the Itabira mines should reach 1,200,000 tons in 1951.

Only compact haematite is exported. As regards the high percentage of fine ores, now rejected, a company has been formed to install sintering plant alongside the mines, and build a blast furnace to transform the sinter into pig iron.

British Industries Fair

It is appropriate that the British Industries Fair, which opened its gates on Monday at Earls Court, Olympia, and Birmingham, almost coincides with the inauguration of the Festival of Britain. While the achievements of this country during the last century will be demonstrated on the South Bank, the B.I.F., which was visited by the King and Queen and Queen Mary on Tuesday, puts the stress on the noteworthy contemporary effort made by every sector of Britain's industry and, moreover, it projects into the future, when a sustained and even greater effort will be required. The two events are, in fact, complementary and to quote the words of Sir Hartley Shawcross, the President of the Board of Trade, this year's British Industries Fair "marks the greatest industrial effort Britain has ever been called upon to make in time of peace."

Acceptances have come from 89 territories, and an important feature this year is the surprisingly high number from American buyers. The U.S.A. total of some 400 visitors leads all other countries for the first time since such records were kept.

Machinery (with the exception of printing machinery, office machinery and brush machinery, all of which appears at Olympia) is shown at the Castle Bromwich, Birmingham, section of the Fair, where 1,241 manufacturers covering the engineering, electrical, building and hardware industries have taken 490,093 sq. ft. of stand space. A feature of this section is the special display of contractors' plant occupying 70,000 sq. ft.—the largest display of its kind ever assembled in Britain. Opening this section on Monday, the Lord Mayor of Birmingham (Alderman A. H. Paddon Smith) said that most of the exhibitors to whom he had spoken already had their order books full, but were prepared to take further orders in the hope that raw materials would be available.

Hunslet Engine Co. Ltd.

Shown at Castle Bromwich (Stand 633D) is a special high-class Diesel locomotive to main-line specifications, evolved for light plantation, estate and industrial transport by the Hunslet Engine Co. Ltd., Leeds 10, and sold by Robt. Hudson Ltd., Leeds.

Of 21 h.p. and 3½ tons weight, it is the first of a new quality range to comprise 21, 34, 52 and 66 h.p. sizes. It is not intended to sell these locomotives for any main haulage, but to operate intensively in gathering and marshalling, the subsequent 52 and 66 h.p. models being used for long hauls. However, all four models have been designed specifically to put in hard day-after-day work of the roughest character throughout a long season with only perfunctory maintenance, leaving overhaul and any renewals to be effected at leisure during the off periods. Moreover, the standards of design and material have been raised to a level high enough to reduce the time required and money expended on repair work.

Another aspect of the policy that guided the design was to provide several standard extras that would enable customers to have more or less their own individual requirements, yet with the benefit of the competitive price that results from standardization. One of the most unusual, but valuable of these extras is a power take-off for driving stationary machinery and another one is a separate cooling water pump and thermostatic control in place of the usual thermo-syphon cooling for this class of locomotive.

Features of the basic design include a one-piece frame structure cast of semi-steel; drop-stamped wheels of high-grade steel with a thick tread over which a tyre can be

shrunk when the limits of wear are eventually reached; Hunslet self-ventilated friction main clutch and gearbox of the type used in powers up to 500 h.p., and an altogether exceptional degree of air, fuel and oil filtration.

Railway, Mine & Plantation Equipment Ltd.

At its stand (Outdoor 1352) at Castle Bromwich, this firm is showing a 10½ tons, 93/102 h.p. Diesel locomotive, type B.G.6, suitable for 24 in. rail gauge and of the 0-6-0 type. This unit will be shipped to Australia immediately after the Fair. The fact that this stand is laid out with track material to enable the company to operate its various exhibits provides a noteworthy feature. For instance, upon a section of track, two granby cars, hauled by an electric battery locomotive are operating on a ramp. A small Diesel locomotive of 20/28 b.h.p. is operating on a section of track, hauling various wagons. The company's wagon exhibits include a salt wagon, a sisal wagon, a small box wagon and a brick-car, as well as a small surface conveyor.

Oldham & Son Ltd.

Exhibits of Oldham & Son Ltd., Denton, Manchester, at Castle Bromwich (Stand C414) include an addition to their range of products. It is the new Oldham Automatic Emergency Lighting System, designed to provide immediate and automatic change-over from mains to battery lighting in the event of a mains failure. This system is being produced in two series: Series I is suitable for small buildings, Series II is designed for factories, office blocks, etc.

Directly a breakdown in the mains supply occurs, instant connection of the emergency lighting circuits of a building to an electric supply from a stationary battery is effected by means of a specially designed automatic relay or contactor. A feature of the equipment is the provision of trickle charging to the stationary battery, which maintains it in perfect condition in a state of full charge.

Included in a comprehensive display of portable electric mine lighting equipment will be the Oldham "GW" cap lamps, one of which will be shown in sectionalized form; "WSA" automatic hand lamps and a range of mines inspection lamps, notably the "QLEM," "QSM" and "WSM," which are specially suitable for the use of colliery officials, rescue parties, and for mechanics, or electricians working long shifts. A cap lamp photometer will also be shown.

Thos. W. Ward Ltd.

Thos. W. Ward, Ltd., Albion Works, Sheffield, and subsidiary companies have two stands at Birmingham (D.719 Indoor and Outdoor 1360). They are designed to show the activities of the various companies of the group which include many branches of engineering, the supply of raw materials, and the provision of various services to industry.

On the indoor stand are displayed photographs of those aspects of the group's operations which cannot be exemplified by machines or equipment. The activities depicted include factory planning and installation work, industrial dismantling, shipbreaking, scrap handling, railway construction, erection of structural steel work, road making and the like. This display shows very effectively the wide range of activities carried on by Ward's departments and branches. Of the photographs shown, the series on the shipbreaking yards are of exceptional interest, depicting

as they do, famous fighting vessels being brought to a final berthing to be broken up for valuable scrap.

On the outdoor stand are exhibited examples of machinery and industrial plant marketed by the parent company, together with unit displays showing the activities and products of the subsidiary companies. Exhibits include sheet metal working machinery; wood working machinery; pumps and compressors, and various items of foundry plant.

Holman Bros. Ltd.

At Birmingham (Outdoor Stand No. 1205/1104), Holman Bros., Ltd., Camborne, are exhibiting portable compressors, represented by one of their range of Diesel-driven two-stage machines, fitted with a Berger Hydraulic Starter, a device which is finding favour with an increasing number of operators.

The original Holman Tractair is by now well-known and large numbers are being used throughout the world by municipal authorities, public utility undertakings, public works contractors and others who employ pneumatic equipment. The model exhibited mounts a larger capacity air-cooled two-stage compressor—130 cu. ft. displacement—and is, therefore, capable of operating more and heavier machines. The power unit in this case is a Perkins Diesel engine, which is available as an alternative to the petrol engine, of the Fordson Major tractor.

The range of two stage stationary air compressors is represented by the smallest (air-cooled) model, an intermediate size and the largest water-cooled machine, with a displacement of 612 cu. ft. per minute. These compressors are of the well-tried differential-piston design, which combines efficiency and reliability with simplicity and compactness. They are fitted with standard Vee-belt pulleys, but are also available for other forms of drive.

The firm's lifting and hauling devices are represented by an Airwinch, a Rotowinch and an "EL" Scraping winch—all compressed air operated.

Operating on a different principle to the vane type Rotomotor is the compressed air Vee engine. This is a piston motor, with two cylinders forming a "Vee." Each cylinder is double-acting. The crank is single-throw, one piston having a connecting rod and the other an articulated rod. Admission cut-off and exhaust of air to either end of both cylinders is controlled by one rotary valve. Large numbers of Vee engines are employed in driving belt conveyors, haulages and other plant.

Rock Drills exhibited include many different types and sizes. At one end of the scale is the Silver Eight—the latest lightweight Handril for pop-holing and similar work. At the other end is the hydraulic Drilrig mounting a pair of 3½ in. Rotofeed drifters. This Drilrig, used for tunnelling, etc., saves the rigging up of the ordinary column gear. Holes may be positioned to a nicety and a large face can be drilled over with the minimum of time and effort. Another, lighter, Rotofeed is mounted on a mobile Tripod—the equipment being suitable for holes to depths of 10 to 15 ft. The Airleg is used in conjunction with the latest Holman development—a rock drill that drills dry without creating dust.

The Pneumatic Tools displayed give some idea of the types of work that can be done by means of compressed air: road rippers, picks and spaders for excavating, rammers for consolidating backfill and for foundry and concrete work; chippers, riveters, drills and grinders for metal working; tube expanders; scalars and paint scrapers, and a submersible pump. Several are new models, shown for the first time. Another new device is the Pneumatic Chain Saw which is capable of cutting through logs or timber up to 18 in. in diameter.

Marshall Sons and Co. Ltd.

This engineering firm, of Britannia Works, Gainsborough, with London offices at Stafford House, Norfolk Street, Strand, W.C.2, is exhibiting the following equipment at Castle Bromwich (Outdoor Stand 1366):

The Field-Marshall series 3 Diesel wheeled tractor, powered by the Marshall single-cylinder horizontal two-stroke Diesel engine, developing 40 b.h.p. at 750 r.p.m., with gearbox giving six forward speeds and two reverse and swinging type drawbar with vertical adjustment. The tractor shown is equipped with hydraulic forward-end loader with ½ cu. yd. bucket.

Also on view is the Road-Marshall type RD series 2 Diesel-engined road roller with Perkins industrial four-cylinder power unit. This series is built in weights from 7½-14 tons and the following extras are available: sliding scarifier, Vulcan-Sinclair Fluidrive coupling, power steering, water sprayers, awning with curtains or enclosed driver's cab and electric lighting.

The company's exhibits also include the Fowler "Challenger" Mark III Diesel Crawler tractor, powered by a Meadows 95 b.h.p. six-cylinder four-stroke Diesel engine, providing 82.4 h.p. at the drawbar and equipped with Bray hydraulically operated angledozer and Blaw Knox power control unit; the Fowler Mark VF Diesel Crawler tractor, powered by a Marshall single-cylinder two-stroke Diesel engine and fitted with Bray hydraulically operated angledozer; and the Fowler Mark VF Crawler tractor—sectional model—with outer casing cut away to allow study of the interior operation.

Metropolitan-Vickers Electrical Co. Ltd.

Metropolitan-Vickers display at Castle Bromwich (Stand No. C510) includes a model of a 100 M.V.A., 220/150/10.5 kV., three-phase transformer group composed of three 33.3 M.V.A. single-phase units—one of the largest transformer groups manufactured in Great Britain; a model of the 17,100 kVA, 600 r.p.m., 11.5 kV vertical A.C. generator, driven by a Boving water turbine, manufactured for the hydro-electric scheme of the State Electricity Commission of Victoria, Australia; a model of a steam turbine for a 100 MW, 3,000 r.p.m. turbo-generator, and a model of a 9,000 h.p. (r.m.s.) geared Ward-Leonard Ilgner winder, based on the design of equipment at present in hand for the National Coal Board's Mosley Common Colliery.

Also on view is the hydraulic profiling equipment for machine tools; this is an inexpensive hydraulic servo equipment which enables most shapes to be machined quickly and accurately to the profile of a master template or sample workpiece. It is available in a variety of forms and sizes. It makes it possible to produce accurate work at a speed which is absolutely impossible by hand; frequent gauging is avoided, and the operation of the equipment is not dependent upon specially trained operators.

Standard motor and control gear are demonstrated, and include the type AMX motor, which has been designed for heavy duty in iron and steel works, and is particularly recommended for driving ore unloaders, car dumpers, cranes, screwdown gear, billet pushers, transfers, shears, etc. It conforms to the standards of the American Association of Iron and Steel Electrical Engineers and is interchangeable with American machines built for similar duties.

As well as a four-panel type HCD contactor starter switchboard for the direct-on starting of A.C. squirrel-cage motors, and a demonstration unit illustrating sequence interlocking control applied to four conveyors. Each panel of the switchboard controls one panel; the conveyor movement, the motor rotation, and the material flow situation are shown through the medium of animated lights.

Westinghouse Brake & Signal Co., Ltd.

Essential brake, signalling, colliery and rectifier equipment is exhibited by the Westinghouse Brake & Signal Co., Ltd., 82, York Way, London, N.1, at Birmingham (Stand C508).

The conversion of electric power is typified by the feeding of the incoming, single-phase mains supply through a bank of Westinghouse static phase converters to actuate a set of three-phase hoists, which in turn handle lifting magnets operated by Westinghouse metal rectifiers. A range of vehicle battery chargers utilize other types of rectifiers and a specially developed system, using rectifier units for the cathodic protection of buried metal structures against corrosion is demonstrated. These units, now being supplied for 560 miles of Middle Eastern pipe-line and for storage tank bottoms at home, are of the "Westalite" type, oil immersed, and incorporate an automatic control that maintains the applied current constant against any change of soil resistance.

Unrivalled experience of railway signalling lies behind the company's development of electric signalling for control of traffic in mines. A model track demonstrates control relays and colour light signals, operated by hand plungers or vehicle treadles. There is also a comprehensive display of photographs, and documentation is readily available in explanatory data sheets.

Imperial Chemical Industries, Ltd.

The Imperial Chemical Industries Ltd.'s main stand at Olympia (No. B9/11), shows by means of maps and photographs, the company's extensive interests abroad. On the stand, details are given of the company's interests in Africa, Argentina, Australia, Brazil, Canada, India and Pakistan, showing how intimately I.C.I. is bound up with the economic life of each country in which it manufactures. I.C.I., with its trading and manufacturing organization, earns about £50,000,000 a year for Britain by direct exports of chemical products and non-ferrous metals. Moreover, I.C.I. is making a great indirect contribution to the export effort of other industries as a supplier of some of their basic raw materials.

The principal wrought metal products of the company's metals division: strip, sheet, plate, tubes, rods, sections and wire in copper and its alloys and aluminium and its alloys are exhibited at Castle Bromwich (Stand No. D409/308).

To illustrate one of the many activities of the division's research department, there is a small team at work, determining the stresses set up in various non-ferrous wrought metals, during and after welding, the object then being to adjust welding practice so that welds with the minimum amount of stress are produced. There is also a display of radiographs of finished welds and an arrangement for taking such photographs, using a "gamma bomb."

Demonstrating the constant interest of the division in solving problems of corrosion and erosion in condenser tubes, the stand contains a typical circulation test apparatus. The data obtained form the basis of a subsequent recommendation for the most suitable condenser tube alloy for service under the conditions investigated.

Copper tubes for domestic water, gas and sanitation services, together with appropriate fittings, are displayed and also "Kuterlon" long-length copper tubing for underground water supplies and panel heating.

A new product of the division—"Kynal" aluminium alloy tread-plate is seen in use on the stand and the wide uses of aluminium alloy extruded and rolled products for building and transport are shown in photographs. Of particular interest in these displays are the extrusions supplied by the division for use in the main ribs of the Dome of Discovery at the Festival of Britain, and extrusions for aluminium alloy railway coaches.

REVIEWS

Wells of Power.—By Olaf Caroe. With a foreword by Lionel Curtis. 1951, London: Macmillan & Co. Pp. xx + 240; Maps 4. 5½ x 8½ in. Price 15s. net.

The two sub-titles of this book, "The Oilfields of South-Western Asia," and "A Regional and Global Study" reveal its purpose—to appraise the prolific oil wells of the countries situated round the Persian Gulf, and many a reader, with his interest for oil aroused by the recent critical developments in Persia, will turn to this book. The author, who has acquired much insight into Asian questions during his career in the Indian Civil Service, succeeds in giving the reader an interesting sketch of the culture of the Islamic countries of the area around the Gulf of Persia—a nerve centre of international affairs for many decades. He states that "in the uneasy period between the disintegration of tribalism and the introduction of a regulated agriculture . . . any peasantry is ripe for agrarian revolution and it is hard to deny that conditions . . . in Persia are such as to encourage revolt." However, when it comes to the central theme of the book—oil—the author does not sufficiently inform the uninformed reader, and he disappoints the expert. "Part II Oil"—the Middle East is the world's second largest oil-producing area—contains not more than 26 pages, of which three are taken up by a Tabular Statement, and another three pages by a Note on Canadian Oil (*sic*).

It is difficult to understand why the author has failed to give a more thorough account of the winning and transporting of oil in this area; in fact, he has largely confined himself in this part of the book to well-known facts which can be looked up in most reference libraries, and he has not taken sufficient trouble to bring the chapter on oil more up to date. For instance, there is no reference to the negotiations between the Anglo-Iranian Co. and the Persian Government on the Supplemental Agreement and the increasingly important rôle played by Middle Eastern oil in the world's oil trade in general, and in feeding refineries in Western Europe in particular, is hardly emphasized. However, any serious reader, who supplements the information on oil given in this book by drawing on other sources, will benefit by the author's individualistic approach to the problems of the Middle East.

The Metal Market Review.—Third Annual Number. Obtainable from 38, Strand Road, Calcutta, India. No price stated.

As in previous years, this valuable publication contains again a large number of interesting contributions on India's metalliferous industries, the new Republic's metal markets, and on important metallurgical developments. It contains, *inter alia*, an article on "India's Mineral Deficiencies," by Dr. M. S. Krishnan, four contributions dealing with aluminium, including Dr. R. M. Agarwal's "Aluminium Industry in India" and a paper by Dr. A. S. Sharma on "Ferro Manganese Industry in India." The statistical section, and maps, enhance the value of this review.

A Guide to the Collection of Gemstones in the Geological Museum.—Third Edition. Pp. vii + 75; Figs. 32; Tables VI. 6 x 9½ in. 1951, H.M.S.O. Price 3s. net.

Since the publication of the second edition of this Guide a quarter of a century ago, the transfer in 1935 of the Museum to South Kensington presented the opportunity to display the gemstones in a more fitting manner than before. Along with those massive minerals which are used for ornamental purposes, the gem minerals are arranged in a series of exhibits in the Main Hall of the Museum and this edition of the Guide describes them as they are now displayed. Descriptions of the principal additions to the collection have been introduced, and some of the old diagrams have been replaced by new drawings.

Metals, Minerals and Alloys

This week interest has tended to be concentrated on the debates and proceedings in Parliament regarding the supplies of metals and minerals. News of general interest is less than usual.

Mr. Charles E. Wilson, U.S. Director of Defence Mobilization, spoke sympathetically in London on Wednesday regarding U.S. re-allocation of materials, especially ferrous and non-ferrous metals. He is reported as saying: "You need more, and we are going to do our utmost to get you more."

The Ministry of Supply announces that forward buying of lead and zinc will only be allowed for the current and following month, but there will be no premium payable. Copper is similarly controlled except that on payment of premium a further five months' purchase is allowed. New prices have also been fixed under Order 4 for various classes of scrap. The changes are all upwards, but the advances are small.

Copper.—Agreement between the United States and Chile over an enhanced price for Chilean metal is stated to have been reached and the results are considered in Santiago as highly satisfactory. Out there, it is said that the U.S. agreed to pay 3c. more per lb. Apparently the official announcement of the outcome of the discussions will be made simultaneously in Washington and in Chile. United States officials have declared that there will be no increase in the domestic ceiling price, but how the divergences are to be reconciled is not known. Apparently the Chilean Government is anxious about Communist subversive plans.

The House of Representatives has boggled over the Senate amendments to the Copper Duty Suspension Bill, and the measure has been tangled up by an amendment over baling twine. More trouble is reported from Northern Rhodesia, where the Mine-workers' Union has given notice of a one-day strike next week, and are demanding that the day should be treated as a paid holiday. The Communist elements in the workers' union seem to be hunting for trouble.

The British Bureau of Non-Ferrous Statistics reports that stocks at the beginning of March were 108,926 tons as compared with 94,038 tons a month earlier. Consumption in March was the equivalent of 45,528 tons, and for the first quarter of the year 143,360 tons against 128,907 tons for the first quarter of last year. The bulk of the increased consumption came from scrap.

Lead.—Anxiety about the supplies of lead from abroad is spreading in the United States, where industry officials fear a drop of 50 per cent compared with 1950, and big manufacturers of lead products are said to be endeavouring to make forward purchases. A moderate tonnage of Australian lead has been purchased at 19½c., f.a.s. Port Pirie, which, with the addition of the import duty, charges, insurance and freight, represents about 22½c. landed New York; this metal is now afloat. The U.S. domestic ceiling price, however, is still 17c. Refined shipments to U.S. domestic consumers in the first quarter are computed as 151,315 s.tons—approximately 117 per cent above the shipments for the first quarter of last year. In the Gulf market sales have been reported from 19c. to 22c. f.a.s. Gulf Ports. The feared decline in imports, if realized, would largely neutralize the benefit of the suspension of stockpile buying. The electric power utilities strike which shut down the Chihuahua smelter of the A.S. and R. Co., was of short duration, but the industry is still faced with a shortage of railway cars and locomotives.

Stocks of lead in the U.K. are reported by the British Bureau of Non-Ferrous Metals Statistics as 32,496 tons compared with 45,407 tons a month earlier. Consumption in March was 27,786 tons and for the first quarter of the year 91,400 tons. Of the consumption, 26,038 was from scrap. The Ministry of Supply states that the lead allocation for May is unchanged at 90 per cent of last year's average monthly consumption. It is hoped to deliver at least 80 per cent and any shortage on the full quota to be delivered in June, additional to that month's quota.

Tin.—The R.F.C. has maintained its price at 142c. per lb. since our last. The Straits and London price continues to fluctuate and the latest figures will be found in our Metal Exchange Correspondent's report below. The most important development is the report that the Malayan Government is seeking to "freeze" part of the proceeds of all rubber and tin sales to help combat inflation and stabilize prices. A Colonial Office statement declared on Monday that nothing was known in London about the plan though it has had a serious effect on the quotations for the shares of companies producing both commodities. Until particulars of the plans are disclosed, any appreciation of the move is impossible. The seriousness of the inflation issue has been pointed out in earlier issues of *The Mining Journal*. No further particulars have been published regarding the interim contract between the R.F.C. and the Bolivian Government, or of the progress of negotiations for a longer agreement after May 31.

U.K. stocks of tin at the end of March were 1,787 tons compared with 1,869 tons at the end of February. U.K. consumption in March was 1,897 tons and for the first quarter of the year 5,968 tons compared with 5,789 tons a year ago.

Zinc.—Supplies in the United States continue scarce and producers who have now to set aside for D.O., are wrestling with the problem of apportioning the balance as fairly as possible to consumers. The export market is quoted 27½c. to 29c. and even higher, with material very scarce. It is reported from Canada that foreign buyers are offering 40c. per lb. for Canadian zinc.

U.K. stocks of zinc at the end of March are reported by the British Bureau of Non-Ferrous Metals Statistics at 34,985 tons compared with 32,556 tons a month earlier. March consumption was 23,418 tons and for the first quarter of the year 73,594 tons against 84,685 tons a year ago.

Aluminium.—Great developments pointing to a very big increase in the output of aluminium are confirmed by this week's news. Alcoa is to build a new plant with an ultimate rated capacity of 85,000 s.tons of aluminium at Wenatchee, State of Washington, which, it is hoped, may begin production some time in the summer of next year. This, combined with the bringing forward of stand-by plants at Messena and Badin is estimated to represent an eventual increase in the company's output of 120,000 s.tons a year. The British Government has undertaken to finance the new projected plant at Tweedsmuir Park, B.C., to the extent of \$40,000,000. This undertaking, some particulars of which were given in our issue of April 20, involves the utilization of the water of a chain of interior lakes and its dropping through a ten-mile tunnel under the Coastal Mountains to an underground power-house 2,500 ft. below the level of the lakes. The smelting plant will be built near the tide-water village of Kitimat. Output is expected to begin in 1954, and with the extensions at Shawinigan Falls and Isle Maligne, should increase the company's output capacity to upwards of 550,000 s.tons. The plant of the Vereinigte Aluminiumwerke, at Tögen, in Bavaria, will now probably remain in Germany, instead of being shipped to America as part of reparations payment. This should leave the German capacity, which is no longer under res-

triction, at around 40,000 tonnes. In Austria it is planned to establish three electric generating stations to supply all Central Europe: at Huben (E. Tyrol), near Braunau on the Inn, and near Jochenstein on the Danube, estimated to produce in all 1,500,000,000 kW.h.

Alcoa has announced the development of a new alloy, XA 78s, said to be ten per cent stronger than the toughest aluminium alloy at present in use. It is of the aluminium-zinc-copper-magnesium group, and is designed particularly for use in aeroplanes.

Antimony.—After the heavy arrivals in February, U.K. imports in March were small at 634 tons, making the total for the quarter 5,828 tons (3,344 a year ago).

Asbestos.—U.K. imports of asbestos in March were 10,112 tons, and the total for the first quarter 24,236 tons (23,171 a year ago).

Beryllium.—Southern Rhodesian production in March was 64 s.tons against 82 s.tons in January.

Chromite.—U.K. imports of chromite in March were 12,436 tons and the total for the first quarter of the year 28,185 tons (27,630 a year ago).

A five-year programme fixing the U.S. Government price at \$115 per ton for 48 per cent ore d.d. Grant's Pass, Oregon, is awaiting final approval by the Defence Production Administration.

Cobalt.—U.K. imports of cobalt improved in March to 234,214 lb., notwithstanding which the total for the quarter was only 860,407 lb. against 1,307,064 a year ago.

Colombian output in January was 39,094 f.oz. against 39,801 f.oz. a year ago.

Molybdenum.—U.K. imports of molybdenite in March amounted to 46 tons.

Quicksilver.—U.K. imports of quicksilver in March were only 26,972 lb. The price in the U.S. is \$215 per flask for large lots.

Sulphur.—While the Sulphur Committee of the International Materials Conference has still to make its report, it is announced in Washington that the export quota for the current quarter of the year has been fixed at 250,000 tons, of which the U.K. is to receive 95,000 tons. The Board of Trade states that detailed allocations for sulphur are to go into effect from Tuesday last based on a quarterly consumption of 100,000 tons of sulphur. Iron and steel, explosives, metal extraction, tinplate and oil refining processes, and food and health services should get their full output requirements. The superphosphate industry will be cut to two-thirds of capacity, and generally speaking, no consumer should receive less sulphuric acid than they have been getting since the beginning of the year. The United States would appear to be doing everything possible to provide fair shares for all in a mineral of which they are the principal, and, in the case of the U.K., the only supplier. Production has risen tremendously in the last ten years and the discovery of new salt domes appears to be disappointing. Last year's production of 5,192,000 tons is not likely to be reached this year and demand is expected to exceed output by some 500,000 tons. Largely increased quantities may be recovered from petroleum gases amounting to nearly 200,000 tons, and efforts will be made to increase recoveries of the smelter gases in the form of sulphuric acid.

Titanium.—U.K. imports of ilmenite in March were small at 4,200 tons making the total for the quarter 30,287 tons (32,316 a year ago).

Tungsten.—There has been no substantial change in market conditions, though there has been perhaps a little more business this week. We should call the wolfram price 510s. to 520s. per unit c.i.f. Some sellers are asking 525s., but there do not appear to be any buyers at this figure. Some business has been done this week with Sweden at 520s.

Gold.—Production of Western Australia in March was 48,177 f.oz. Mexican output in January was 28,960 oz., considerably below the average monthly production in 1950.

The London Metal Market

The movements of the London and Singapore prices this week can only be described as erratic, as, for example, over the week-end the Eastern price fell approximately £5 while the London market rose £20 a ton. Enquiries from the Continent and South America have been of a spasmodic nature, but even then it is understood little business has been closed.

In the United States the Administration's control of tin became almost absolute on May 1, and it is to be feared that many importers will now be forced out of the tin business, unless the present representations which are being made in Washington meet with success.

The main features in the other metals have been the agreement on the copper price between Chile and America (the consequence of which cannot yet be fully appreciated), and the definite weakening of ordinary grade zinc to around the £300 per ton mark.

On Thursday the official close on the tin market was: Settlement price £1,145, Cash Buyers £1,140, Sellers £1,145; Three months' Buyers £1,125, Sellers £1,130. In the afternoon the market was steady. Turnover for the day was 75 tons. Approximate turnover for the week was 860 tons.

The Eastern price on Thursday morning was equivalent to £1,155 per ton c.i.f. Europe.

Iron and Steel

The statement made by the Minister of Supply in Parliament this week on the subject of the steel situation was singularly uninformative. He confined himself exclusively to a recapitulation of known facts, carefully avoided any forecast of the adequacy of the production of steel during the remainder of the year, to meet the heavy demand which has already developed, and made no mention whatever of the tripartite discussions of a steel allocation scheme in which the Iron and Steel Federation, the Steel Corporation and the Ministry of Supply are participating.

It is no news to be assured that Britain's stocks of steel making raw materials are "dangerously low," or that ingot production will be below last year's record of 16,300,000 tons. We are still in the dark concerning the quantity of steel which will be required for re-armament and how the residue will be shared between home industries and the export markets.

The shipping shortage is a little easier, and it may be possible to increase imports of Algerian and Swedish ores, but we have used up about a 1,000,000 tons of our stocks of raw materials during the past six months, and much of the ore which we have failed to lift from foreign parts during that period has gone elsewhere. Some increase in the output of native ironstone is to be expected but the smelting of those heavier ores will involve a bigger coke consumption and the Minister of Supply seems to be penning his hopes in part upon the purchase of more pig iron from the Continent; and upon the exercise of "the greatest ingenuity" on the part of manufacturers to overcome the difficulties arising from the steel shortage.

It is a gloomy prospect. A considerable number of steel furnaces have been laid idle and others are operating on a hand to mouth basis. In these circumstances the national scrap drive is invested with the greatest possible urgency. Every ton of scrap is needed to keep the furnaces at work, and further efforts to augment supplies from every possible source may be anticipated.

The demands made upon the steel mills at present are certainly very heavy—so much so that a cessation of new business for a month or two would be no embarrassment. Further export commitments have also been accepted though overseas trade has been slowed down to some extent by lack of shipping space particularly to Australian ports.

Re-rollers are working to the limits imposed by the supply of semi-finished steel, but sheet steel is very scarce and very little galvanizing is possible because of the lack of sulphuric acid. Scarcity of pig iron is also affecting the activities of the foundries. Hitherto they have been able to carry on by making inroads upon their stocks but these are down to a very low level and the scarcity of low and medium phosphorus iron is now a serious difficulty.

MAY 3 PRICES

COPPER

Electrolytic...	£210 0 0 d/d
Fire refined, high conductivity	£210 0 0 d/d
Fire refined, high grade	£209 10 0 d/d
Fire refined, ordinary quality	£209 0 0 d/d
Fire refined, ordinary quality + 99.2%	£208 10 0 d/d

TIN

(See Metal Notes above for Thursday's Metal Exchange prices)

LEAD

Soft foreign, duty paid	£160 0 0 d/d
Soft empire, including secondary lead	£160 0 0 d/d
English lead	£161 10 0 d/d

ZINC

G.O.B. spelter, foreign, duty paid	£160 0 0 d/d
G.O.B. spelter, domestic	£160 0 0 d/d
Prime Western	£160 0 0 d/d
Electrolytic and refined zinc	£164 0 0 d/d
Zinc (99.99% Zn)	£166 0 0 d/d
Sheets	£176 0 0 ex works
Zinc oxide (red seal)	£178 0 0 d/d
Zinc oxide (green seal)	£179 0 0 d/d
Zinc oxide (white seal)	£180 10 0 d/d

ANTIMONY

English (99%) delivered,	
10 cwt. and over	£390 per ton
Crude, (70%)	£305 per ton

NICKEL

99.5% (home trade)	£406 per ton
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OTHER METALS

Aluminium, £124 per ton.	Palladium (scrap), £8 oz.
Bismuth, 22s. 6d. lb.	Platinum, £27/33 5s. nom.
Cadmium, 17s. 3d./18s. lb.	Rhodium, £45 oz.
Chromium, 5s. 3d. lb.	Ruthenium, £30 oz.
Cobalt, 15s. 6d. lb.	Quicksilver, £73 10s./£74
Gold, 248s. f.o.z.	ex-warehouse.
Iridium, £65 oz. nom.	Selenium, 25s. nom. per lb.
Magnesium, 1s. 6d. - 2s. lb.	Silver (bar), 78½d. f.o.z. spot
according to quantity.	and forward.
Osmiridium, £35 oz. nom.	Tellurium, 19s. lb.
Osmium, £70 oz. nom.	
Palladium, £8 10s. oz.	

ORES, ALLOYS, ETC.

Bismuth	40% 11s. per lb. c.i.f.
	30% 9s. 6d.
Chrome Ore—	
Rhodesian Metallurgical (lumpy)	£11 per ton c.i.f.
" " (concentrates)	£11 per ton c.i.f.
" " Refractory	£10 12s. per ton c.i.f.
Baluchistan Metallurgical	£11 11s. per ton c.i.f.
Magnetite, ground calcined	£26 - £27 d/d
Magnetite, Raw	£10 - £11 d/d
Manganese, Best Indian	(Nominal)
Molybdenite (85% basis)	(Nominal)
Wolfram (65%), U.K.	510s./520s. c.i.f. nom.
Tungsten Metal Powder	33s. 6d. nom. per lb. (home)
(for steel manufacture)	
Ferro-tungsten	31s. 6d. nom. per lb. (home)
Carbide, 4-cwt. lots	£30 18s. 9d. per ton
Ferro-manganese, home	£36 1s. 1d. per ton
Ferro-manganese, export	Nom.
Brass Wire	2s. 4½d.
Brass Tubes, solid drawn	1s. 10½d.

Mining Men and Matters

Mr. H. N. Lightbody has been appointed senior mining engineer on the staff of the Colonial Development Corporation's Mineral Division.

Mr. K. C. Mithal has left the Chrestian Mica Industries Ltd., Domchanch, and has joined Jharkhand Mines & Industries Ltd. and associated companies, as chief mining adviser and engineer.

Mr. Ivar Rooth, a Swedish banker, has been named managing director of the International Monetary Fund, in succession to M. Camille Gutt.

Mr. H. Watson Smith has been appointed to the Board of Shipley Collieries, Ltd., and its subsidiary companies.

Institution of Mining Engineers will hold their Summer Meeting in Nottingham on July 4, 5 and 6.

Tin Research Institute have announced that their new research laboratory will be opened by H.R.H. the Duke of Gloucester at 3 p.m. on Thursday, May 31, 1951.

The Institution of Mechanical Engineers have awarded the 1951 James Watt International Medal to Dr. H. H. Blache of Denmark.

The Colonial Development Corporation has announced that it has recently purchased a number of tin mining properties at Murongo on the Tanganyika-Uganda border.

Johannesburg Consolidated Investment Co., Ltd., and its Associated Companies announce that they are returning to 10 and 11, Austin Friars, London, E.C.2, with effect from April 30, 1951. (Tel.: London Wall 7011).

Overseas Students at Kent Colliery.—Fifteen students from eleven countries took part in a week-end course on "Coal Mining in Kent" arranged by the British Council in co-operation with Betteshanger Colliery Group Training Centre, between April 27 and 29.

Symposium on Mineral Dressing, September, 1952.—Arrangements are now being made by the Council of the Institution of Mining and Metallurgy to hold a two-day Symposium on Mineral Dressing on September 23 and 24, 1952, at the Imperial College of Science and Technology, South Kensington, London, S.W.7. The purpose of the Symposium will be to discuss recent developments (a) in fundamental concepts and experimental methods; (b) in practice at selected plants of particular interest; and (c) in plant design and machine manufacture. Several papers are already in preparation, and others are being considered by prospective authors. Anyone who wishes to submit a paper is invited to send a synopsis of its contents and an indication of its probable length to the Secretary of the Institute, Salisbury House, London, E.C.2.

I.M.M. Awards.—The Council of the Institution of Mining and Metallurgy has conferred honorary membership of the Institution on Sir Henry Tizard, in recognition of his outstanding services to science, industry and education, and on Sir Andrew Bryan, in recognition of his distinguished services to the mining industry of the United Kingdom.

Mr. James Peterkin Norrie and **Mr. William Thomas Pettijohn** have been awarded conjointly the "Consolidated Gold Fields of South Africa Ltd., Gold Medal" for 1950 for their paper on "An Outline of Underground Operations Mufuhira Copper Mines" (transactions, vol. 59); and **Mr. Harold Leroy Talbot**, and **Mr. Harold Nicholas Hepker** have been awarded conjointly the "Consolidated Gold Fields of South Africa's premium of 40 guineas," for 1950 for their paper on "Investigations on the production of electrolytic cobalt from a copper-cobalt flotation concentrate" (transactions, vol. 59).

Mr. Gerald James Mortimer has been awarded the "William Frecheville" Students' Prize for his paper on "Grade Control" (transactions, vol. 59).

Business Items

Mr. J. P. Gilliver, secretary, and **Mr. A. J. Nicholas**, director and general manager of South Wales Switch-Gear Ltd., have been appointed to the board of Aberdare Cables. **Mr. H. D. Bell**, having taken up permanent residence abroad, has resigned from the board.

Mr. S. D. Gordon has been appointed technical representative for the Crucible and Refractories Departments of the Morgan Crucible Co. for S. Wales and S.W. England.

Mr. A. Clifford Hartley has been appointed a Director of Johnson & Phillips, in place of **Mr. H. J. Sheppard**, resigned.

Boyles Bros. Drilling Co., Ltd., have announced that as from May 1, all communications should be addressed to Boyles Bros. Drilling Co., John Street Works, South Gosforth, Newcastle-upon-Tyne 3. Telephone: Newcastle-upon-Tyne 53971/2.

The Mining Markets

(By Our Stock Exchange Correspondent)

The Stock Exchange began the week in the same uncertain frame of mind as it had ended the last one. As it gradually became apparent, however, that the administration proposed to remain in office notwithstanding the internal upheavals of the Labour Party, business settled down again. Profit-taking, which had begun to show itself among leading industrials after the recent sharp rise, was easily absorbed, and in most cases dealers were rather relieved to see some stock on their books after previous short selling. Brokers generally saw rather less business than for some time past. Gilt-edged remained quiet with a slightly easier tendency.

Kaffirs were off on the week. Although there was little serious selling, investors' attention was focused on other fields of enterprise, and the forthcoming discussion in Washington on the question of premium gold sales introduced a note of caution. Just how important these premium sales are to the Rand mines was again emphasized by the March quarterly figures from Johnnies. Low grade mines such as Randfontein and New State Areas would be badly off without the proceeds from premium sales to offset higher production costs. In the case of the latter company, money received from this source actually exceeded the normal March quarter profit, being £19,918 against £11,624. While it seems unlikely that the South African Government will agree to any American sponsored measure to curtail these premium sales, holders of Kaffir shares would do well to keep a wary eye on the price of gold in the world's free markets. Southern Van Ryn propose to reduce the issued capital of the company by writing 1s. off each 2s. share. The resulting 1s. shares will then be consolidated into shares of 2s. each. This reconstruction

will enable the company to raise money if necessary to take up rights in the Lucas Block to the south of Stilfontein. Southern Van Ryn closed firmer at 2s. 4½d. on the news.

Orange Free State issues confirmed to the general tone. In this field a report from Virginia Gold Mining dated May 1 is of great interest. This company has again broken the world shaft sinking record for the second month in succession. 504 ft. have been sunk at No. 3 shaft over a 30 day period. It is estimated that there is now less than 400 ft. to go before the Basal reef is intersected.

Coppers held up well, and in many cases the price of the dividend was quickly made up after the shares went ex dividend. Roan Antelope have doubled the 10 per cent interim dividend paid last year, and market circles are canvassing the likelihood of a double final, making 50 per cent in all for the year. There was some surprise that the company have decided not to emigrate.

Eastern tin shares declined. All the leading issues were marked down following reports from Singapore that the Malayan Government were considering "freezing" a part of the proceeds of sales of tin and rubber. Later the market steadied while awaiting more exact information.

Diamond shares were a good feature on further consideration of the strong position of De Beers and allied companies. The highly liquid position of De Beers in an inflationary period has come in for some criticism, but it should be remembered that this concern is now able to invest in any promising enterprise that may offer outside the diamond trade. For instance, it seems probable that some of the De Beers cash will be used to finance Orange Free State undertakings and South African industry.

Wankie Colliery shares jumped 1s. 6d. their first major improvement for some time. Market sources report that a very large seller has finally completed operations.

FINANCE		Price	+ or -	O.F.S.		Price	+ or -	MISCELLANEOUS GOLD		Price	+ or -	TIN (Nigerian and Miscellaneous)		Price	+ or -
		May 2				May 2				May 2				May 2	
African & European.....		3 ½		Alpha F.S.A.....		14/9	-6d	G.F. Rhodesian.....		9/9	-9d	Amalgamated Tin.....		12/	-3d
Anglo-American Corp.....		8 ½		Blankpoint.....		25/7 ½	-7 ½d	London & Rhodesian.....		5/10 ½	+1 ½d	Beralit Tin.....		25/9	+9d
Anglo-French.....		23/9		Central Mining F.S.....		5/6	-4 ½d	Motapa.....		3/10 ½		Bisich.....		4/7 ½	
Anglo Transvaal Consol.....		41/10 ½		Fredricks.....		18/6	-3d	Mysore.....		6/3	-3d	British Tin Inv.....		18/	-6d
Camp Bird.....		14/9	-1 ½d	Fredricks S.....		11/3	-1/3	New Guinea.....		1/9		Ex-Lands Nigeria.....		8/	
Central Mining (71 shrs).....		48/11 ½	-7 ½d	F.S. Soudth.....		12/6	-6d	Nundydoo.....		9/3	-3d	Geevor Tin.....		19/	+9d
Consolidated Goldfields.....		2 ½		Geofries.....		3/8		Ooregum.....		14/	-3d	Gold & Basalt.....		4/3	-1 ½d
Consol. Mines Selection.....		36/3		Harmony.....		25/6	-1/3	Oroville.....		37/6	+1/10 ½	Jantar Nigeria.....		7/9	
East Rand Consol.....		4/10 ½	-1 ½d	Levenberg Estates.....		12/6		St. John d'El Rey.....		35/	-9d	Jos Tin Area.....		11/3	
General Mining.....		61		Nichols Wits.....		25/6	-1/8	Zams.....				Kaduna Prospectors.....		4/3	
H.E. Prop.....		41/3	-1/10 ½	Osits.....		25						Ka Juma Synd.....		6/6	-3d
Henderson's Transvaal.....		10/9	-3d	President Brand.....		18/	-1/4					London Tin.....		5/4 ½	-4 ½d
Johnnies.....		34 ½		President Steyn.....		18/	-1/3					Rhion Valley.....		1/6	
Rand Mines.....		7 ½		St. Helena.....		35/7 ½	-1/3					United Tin.....		3/	
Rand Selection.....		45/9	-7 ½d	U.F.S.C. & G.....		10/3	-9d								
Union Corporation.....		11 ½		Virginia Deb.....		77									
Vereniging Estates.....		64	-7 ½d	Virginia Ord.....		15/4 ½	-1/4								
Wits.....		35/7 ½		Welkom.....		43/11 ½	-1/10 ½								
West Wits.....		2 ½				34 ½	- ½								
RAND GOLD		Price	+ or -	WEST AFRICAN GOLD		Price	+ or -	DIAMONDS		Price	+ or -	SILVER, LEAD, ZINC		Price	+ or -
		May 2				May 2				May 2				May 2	
Blyvoor.....		52/6	-1/3	Amalgamated Banket.....		2/7 ½		Anglo American Inv.....		4 ½	+ ½	Broken Hill South.....		61/3	+1/9
Brakpan.....		22/3	-3d	Ariston.....		8/	-1 ½d	Casti.....		39/9	+1/9	Burma Corporation.....		4/1 ½	
City Deep.....		3 ½	- ½	Ashanti.....		91/3	-1 ½d	Cons. Diam. of S.W.A.....		3 ½	-1/4	Consol. Zinc.....		38/	+2/6
Consol. Main Reef.....		2 ½	+ ½	Bibiani.....		12/7 ½	-7 ½d	De Beers Deft. Bearer.....		61/3		Lake George.....		28/9	
Crown.....		4 ½		Breman.....		3/10 ½	-1 ½d	De Beers Pfd. Bearer.....		17 ½		Mining Trust.....		5/10 ½	+8d
Daggas.....		3 ½		C.C. Main Reef.....		4/11 ½	-1 ½d	Chartered.....		72/	+9d	Mont Is.....		47/	+2/
Domination Reef.....		2/	-1 ½d	G.C. Selection Trust.....		3/11 ½	-1 ½d	Indian Copper.....		5/3	-3d	New Broken Hill.....		31/8	+3d
Doornfontein.....		27/6		Kwahu.....		5/3	-6d	Nchang.....		5 ½	- ½	North Broken Hill.....		78/9	
Durban Deep.....		4 ½		London & African Mng.....		3/11 ½	-1 ½d	Rhod. Anglo-American.....		63/3x0		Rhodesia Broken Hill.....		24/3	-1/
F. Daggas.....		28/9	-2 ½	Lyndhurst Deep.....		1/3	-1 ½d	Rhodesian Selection.....		41/3x0	-1/9	San Francisco Mines.....		75/	+5/
E. Geduld (14 units).....		2 ½	- ½	Marlu.....		3/11 ½	-1 ½d	Rhod. Anglo-American.....		22/9		Trepca.....		4/	
E. Rand Props.....		8 ½		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Geduld.....		8 ½		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Grootevlei.....		43/11 ½	-10 ½d	Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Libanon.....		17/9	-3d	Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Lupatse Vlei.....		42/9	-9d	Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Marievale.....		23/9	-9d	Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Modderfontein B.....		6 ½		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Modderfontein East.....		2/6		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
New Kleinfontein.....		36/3		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
New Pioneer.....		26/3	-1/3	Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Randfontein.....		21/3		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Robinson Deep.....		18/6		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Rose Deep.....		42/9	-9d	Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Simmer & Jack.....		7/6		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Spruit.....		12/3		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Sib Nigal.....		34		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Van Dyk.....		17/3	-6d	Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Venterspost.....		32/6	-7 ½d	Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Vlakfontein.....		22/3		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Voerstryksburg.....		26/3	-9d	Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
West Driefontein.....		6 ½		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
W. Rand Consolidated.....		47/6		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					
Western Reefs.....		42/6		Nawa.....		1/11 ½	- ½	Rhod. Anglo-American.....		25 ½					

Company News & Views

Lorraine Gold's First Report

Registered in November of last year with an authorized capital of £5,500,000 in 10s. shares, Lorraine Gold Mines issues its report for the period ended December 31, 1950. It contains facts regarding the property and gives up-to-date information on shafts and surface work.

The property consists of about one-half (the western portion) of what was known as the Wit Extensions block on which a prolonged drilling campaign was carried out, and results obtained indicated that the Basal Reef horizon underlies the area except where interrupted by faulting.

Two shafts are being sunk. On the completion of the collar for No. 1 shaft and the erection of the permanent steel headgear, sinking operations were started in November of last year and by the end of March, 1951, the shaft had reached a depth of 636 ft. The Basal Reef horizon is estimated to lie at a depth of 5,000 ft. The excavations for the collar of No. 2 shaft were started early this year and sinking is being started.

Surface construction work has been going ahead and, pending the completion of permanent buildings and accommodation at Allanridge where employees will live, a large number of temporary buildings have been erected for them. Mine stores and permanent workshops have been put up together with compressor house, etc. The company has benefited as a result of experience gained in the Welkom area in regard to general surface layouts and designs and also in connection with shaft sinking technique. Furthermore, the mine has derived help by the co-operation and facilities made available by the Anglo American group.

The balance sheet shows mining rights £496,483, shaft sinking and equipment £627,448, stores and materials £380,913. The balance sheet total is £1,546,641.

Rhodesian Corporation Capital Adjustment

The activities of Rhodesian Corporation are widely spread over Southern Rhodesia. Apart from mining interests in the Fred, Redwing and Falcon Mines, it also holds various claims, estates and land. It has agricultural interests with pedigree and ranch cattle, while it cultivates tobacco and has commercial and industrial interests. The company benefited by the settlement of its taxation affairs and a new basis was adopted for the valuation of shareholdings brought about by virtue of the judgment in a case connected with the valuation of trade stocks.

The annual report for the year ended July 31, 1950 giving a review of operations, states that as the Fred mine, which has been a valuable asset, has practically reached the end of its life, the Board in reviewing the position of the company's assets consider the time has arrived when writing down is necessary. Proposals are therefore to be submitted to shareholders for the reduction of the capital to £977,778 by writing the sum of 1s. 8d. off each of the existing 5s. shares, reducing them to multiples of 3s. 4d. each.

Profit for the year amounted to £32,632, to which was added the unappropriated balance of £40,673, profit on sale of farms £8,173 and transfer from General Reserve £4,301, making a total of £85,779. This amount has been appropriated to taxation £4,437 and provision for depreciation of investments £81,342.

In his statement the chairman refers to the General Reserve of £45,699, available for future contingencies and expenses in connection with the reduction of capital. He points out that during the course of the year the Bank overdraft of £48,851 has been converted into a cash balance of £57,850. This will enable the company to implement without anxiety its financial undertakings. It is developing the

Redwing mine and will have a vendor and subscription rights in the Pickstone. It is also helping to finance the Rhodesian Brick and Potteries Co., in which it is interested, in their scheme of expansion.

Consolidated Murchison Pays 140 per cent

The results of Consolidated Murchison (Transvaal) Goldfields and Development Co. for the calendar year 1950 has justified market expectations. Output of antimony concentrates and cobbed ore amounted to 14,545 s.tons, exceeding the 1949 results by 6,555 s.tons and gold output increased by 1,988 oz. to 10,905 oz. Although working costs per ton milled advanced 10s. to 56.36s. per ton milled, working profit rose by £375,358 to £554,702.

Two dividend payments, one of 30 per cent and another of 110 per cent absorbed £291,200, taxation called for £144,000, the sum of £27,785 was appropriated for capital expenditure and the balance remaining, £144,151, was carried forward, compared with £48,246 previously.

Footage sampled during the year totalled 5,679 ft., of which 4,486 ft., or 78.90 per cent, proved payable. Ore reserves at the fiscal year end, deemed payable on account of gold and antimony combined, were estimated to be 184,000 tons. In addition, a tonnage of 40,000 tons with an average value of 6.8 dwt. per ton was deemed payable on account of gold content only.

During the year it was decided to abandon the option on the 1,900 base metal claims granted by the Afrikaner Proprietary Gold Mines.

S.A. Towns Increases its Investments

Registered in 1896, South African Townships Mining and Finance Corporation has a substantial portfolio of mining shares and also town, farm and house property. The market value of its investments at the end of December, 1950, stood at £4,801,156 compared with a book value of £2,157,070. Of this latter figure, £2,074,996 represents the corporation's shareholdings in companies other than its subsidiaries and shows an increase of £236,429 compared with last year's figure.

Revenue for the calendar year 1950 declined from £180,510 to £169,748, and after meeting all expenses net profit figured at £146,591 against £159,412. The dividend payment was maintained at 6d. per 10s. share, absorbing £120,000. Taxation was much lighter at £4,700 against £23,000, and after providing for these and all other appropriations the forward balance was increased by £37,307 to £193,800.

The chairman, Mr. H. C. Koch, in his statement accompanying the report and accounts, said that township sales must necessarily remain somewhat restricted until various new townships are formed, but the property market shows signs of improvement and the few stands the corporation offered in townships, such as Bryanston, met with a fairly steady demand.

Ashanti's Higher Revenue

Reflecting the first full year in which the higher gold price has been operative, the profits of Ashanti Goldfields Corporation advanced by £470,794 to £1,138,426 during the year to the end of September, 1950. This result must be considered as extremely satisfactory since it was arrived at after paying no less than £279,212 (£224,162) in Gold Coast taxation and allowing £127,986 (£13,232) for depreciation.

Dividend payments kept pace with earnings, being stepped up to 62½ per cent against 40 per cent on the £1,248,557 of issued capital. A further £25,000 was placed to fixed assets replacement reserve, which now stands at £75,000, and general reserve was increased to £300,000 by transferring to it £175,000. The carry forward

amounted to £213,507 compared with £221,138 previously.

The higher gold price has increased the incentive to develop some of the low-grade mines on the company's properties and output from the Ayeinm Mine totalled 28,836 tons, an increase of 6,000 tons over last year. Development work at Sansu was also accelerated. The main shaft was sunk 77 ft. to a total of 178 ft. below the collar, a new level, No. 9, was commenced and a total of 5,500 ft. of general development was carried out, disclosing some interesting results.

Due to the sliding scale tax formula used in the Gold Coast, Ashanti, as West Africa's richest gold producer, has borne the heaviest rate of taxation in the industry. Therefore, the statement by the chairman, Major-General L. Spears, in his address to shareholders, that taxation of the Gold Coast mining industry was on the point of being reviewed is of the greatest importance to the company and to shareholders.

Since the close of the financial year work at the mine continued steadily. During the first six months of the current year ended March 31, 1951, tonnage treated averaged 29,583 tons per month from which 37,434 oz. of gold were recovered, yielding a profit of £106,707. Development footage advanced during this period amounted to 13,249 ft.

Bibiani's Good Results

The report and accounts of Bibiani (1927), the important West African gold producer, for the year ended September 30, 1950, showed that the company by its steady progress in the post-war period was able to reap the full benefits of devaluation. The tonnage milled totalled 333,422, the highest in the company's history. The monthly rate of production reached the target level of 30,000 tons, averaging 6,200 oz., and the company was able to maintain the same scale of development as in the two previous years. Gross earnings increased by £350,309 to £953,041 and although expenses generally were higher, profit before taxation amounted to £334,587 compared with £82,030 previously. The improved results attracted a much higher tax, the total of £141,000 being required against £10,000 in 1949. Fixed assets replacement account received a further £25,000 and now stands at £75,000. The sum of £60,000 was added to general reserve, increasing it to £100,000. Dividend distributions aggregated 25 per cent against 12½ per cent, leaving the forward balance higher at £183,858 compared with £178,361.

Of the 20,328 ft. advanced during the year, 12,000 ft. were accounted for by exploration. Although the hopes of good values continuing in the East Reefs were not fulfilled, work on the South ore body on levels 16 and 17 proved to

be of considerable interest. Development work carried out on these two levels contributed 173,000 tons of 5.3 dwt. ore to reserve, which at the fixed year end stood at 1,759,813 tons, averaging 5.36 dwt. per ton.

Since the close of the financial year work at the mine continued steadily. During the first six months of the current year ended March 31, 1951, tonnage treated averaged 29,583 tons per month from which 37,434 oz. of gold were recovered, yielding a profit of £106,707. Development footage advanced during this period amounted to 13,249 ft.

Konongo's Improved Development Results

Konongo Gold Mines for the year ended September 30, 1950, milled a total of 84,826 tons, of which 34,365 tons were crushed on account of Lyndhurst Deep Level (Gold and Silver) Ltd., yielding 10,434 oz. The 50,461 tons treated on Konongo's own account showed a reduction of nearly 40 per cent from last year's figure when 82,345 tons were treated, and prevented the company from taking full advantage of the first year's operation at the higher gold price.

The lower crushing rate was partly responsible for the rise in milling costs by 3s. 2½d. to 15s. 4d. per ton, and was one of the chief contributory factors in raising working costs by 16s. 11d. to 61s. 10d. per ton. On the other hand, the milling grade improved to 11.50 dwt. compared with 10.64 dwt., so that the total gold output of 43,239 oz. was only slightly less than the previous year's figure of 43,575 oz. The net result was that the working profit, after charging depreciation, amounted to £175,879 against £107,446. Taxation called for £104,500 against £56,000, general reserve account received £30,000 against £50,000 and after maintaining the dividend distribution of 10 per cent (less tax at 9s. 6d.), which absorbed £32,511, the carry forward was higher at £61,379 against £54,679 previously.

Considerable improvement in the development results were achieved during the year when 21 per cent of the 3,092 ft. of driving on the reef channel proved payable compared with 6 per cent previously. Total footage advanced amounted to 4,444 ft., an increase of 566 ft. Although development results in the Odumase section were disappointing, results obtained in the Boabedroo section, on the S.W. Drive from the Lyndhurst concession into Konongo ground have been particularly promising. An ore shoot, 380 ft. averaging 237 dwt. per ton over 58 in., has been fully exposed and plans to explore and develop this ore shoot in depth from an internal vertical shaft are drawn up.

Ore reserves at the end of September, 1950, including 69,228 tons in pillars, totalled 161,538 tons averaging 12.3

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dwt. per ton over 49 in., a reduction on last year's figures of 23,938 tons and 1.2 dwt. per ton in grade.

Killinhal Rises Dividend

The drop in net earnings of Killinhal Tin for the year ended September 30, 1950, by £27,811 to £85,440, was due to its dredge having to work through a large proportion of tailings during the first four months of the year. Thus, in spite of a greater acreage worked and volume of ground treated, recovery per cu. yd. declined to 0.61 lb. against 0.83 lb. with the result that the tonnage tin ore recovered decreased by 168 tons to 524 tons. Although the price received per ton tin ore advanced £52 2s. 4d. to £364 17s. 6d., much of this gain was offset by the rise in production costs by £46 to £176 7s. 7d. per ton.

Dividend payments were increased to 25 per cent against 20 per cent and after meeting taxation liabilities amounting to £65,200, the carry forward was increased by £1,214 to £10,629.

Since the end of the financial year the company's claim for War Damage was assessed at £90,588. An interim payment of 60 per cent amounting to £54,352 was received and set off against the advance of £81,543 received from the Malayan Government towards expenditure on rehabilitation which to September 30, last, totalled £118,061.

The prospects for the current year appear favourable. In the first six months of the current year ended March 31, 1951, 259 tons of tin ore was produced and "sold at a high price."

Company Shorts

Normetal Mining Corporation have announced that during 1950, 363,297 tons were crushed and that estimated profit after provision for depreciation and all taxes amounted to \$3,040,290.

Nanwa Gold's First Output.—Nanwa Gold Mines report for the March quarter disclosed that tonnage mined and hoisted amounted to 4,702 tons, of which 3,257 tons were crushed, all valued at about 4.2 dwt. per ton. 42 ft. of vertical development, to improve ventilation, was undertaken. No further ore has been added to reserve. The company's first output of 93.60 oz. bullion equivalent to 822 f.o.z. have been banked.

Virginia Repeats Shaft Sinking Performance.—Virginia Orange Free State Gold Mining Co. has broken the world's shaft sinking record for the second month in succession. During April 405 ft. were sunk at the No. 3 shaft and lined throughout during a 30-day period. This record-breaking performance brings the total depth of the shaft to 1,054 ft., and eclipses its own previous record by 34 ft. The result is all the more impressive as it was achieved when the changeover from temporary to permanent hoists was being made, which caused the loss of one and a half shifts.

Tharsis' Pays 10 Per Cent.—Results for the year ended December 31, 1950, of Tharsis Sulphur and Copper showed that net profit, after providing £136,412 for taxation, amounted to £124,126 which compares with £80,234 earned in 1949. Dividend payment was stepped up to 10 per cent (7½ per cent). Replacement reserve received £50,000 (same) leaving the forward balance higher by £8,501 at £183,488.

During the year the rehabilitation of the mines continued and four steam locomotives and two diesel locomotives were added to the rolling stock. Further, the potential capacity of for crushing ore at Corrales was enlarged by the completion of a second unit of the crushing plant.

St. John d'el Rey's Offer to Shareholders.—Preliminary announcement of results of St. John d'el Rey Mining Co. for the year 1950, disclosed that after charging U.K. taxation of £212,993 (£167,702) and depreciation of £80,610 (£45,000), net profit amounted to £137,722. Preference dividends aggregating 10 per cent net and ordinary dividends totalling 10 per cent net will be paid on June 15 to stockholders registered on May 21. The carry forward amounted to £55,091 against £50,213 (all figures subject to audit).

Ordinary stockholders registered on May 21 are to be offered new ordinary shares of £1 each at 25s. per share in the ratio of one new share for every £14 Ordinary stock held. Provisional allotment letters will be posted to stockholders on June 15.

Stillfontein's Quarterly Results.—For the three months ended March 31, the Charles shaft was sunk 267 ft. to a depth of 2,766 ft., the Margaret shaft was sunk 465 ft. to a depth of 1,536 ft. the contact reef being intersected at a depth of 1,475 ft. Sampling on the reef was carried out at intervals of 5 ft. around the perimeter of the shaft. Twenty-two sections with an average assay value of 5.2 dwt. per ton over 30 in. equivalent to 156 in.-dwt. of which 50 ft. on the northern end of the shaft averaged 8.26 dwt. over 31.2 in. equivalent to 258 in.-dwt. It is reported that small water fissures encountered were successfully treated by cementation. Development work carried out during the quarter amounted to 1,120 ft. on the Vaal Reef. Of 520 ft. sampled 453 ft. equivalent to 87.5 per cent payability, averaged 46.1 dwt.

Nigel Gold Reduces Ore Reserves.—Tonnage milled at Nigel Gold Mining for the calendar year 1950 declined from 470,000 tons to 452,000 tons. Ore reserves showed a decrease of 125,688 tons to 532,914 tons of an average value of 4.03 dwt. Costs continued to rise and the directors state that the difference between revenue and costs per ton of ore treated is becoming smaller and smaller, thus putting the mine back into its pre-devaluation position, when the main pre-occupation was to keep the mine going in the hope of a change in the gold price. Nevertheless, net profit amounted to £94,059 out of which dividend payments totalling 12½ per cent were paid absorbing £89,304, and after taking into account all other appropriations the carry forward amounted to £127,462 compared with £127,409 previously.

Blinkpoort Gold Extends Option to June 30, 1952.—Blinkpoort Gold Syndicate gave subscribers to the issue of 500,000 new shares offered in March, 1950, an option to take up one further share in the company at 35s. for each share subscribed. At that time it was considered that further capital would be required by Free State Geduld Mines soon after June 30, 1951, and it was intended to earmark the proceeds of the options, if exercised, for that purpose. However, on information now available it appears that the cash resources of Free State Geduld Mines will last somewhat longer than originally anticipated and in these circumstances the directors of Blinkpoort recommend that the time during which option holders have the right to take up their shares should be extended for one year to June 30, 1952.

Rand Mines.—The report and accounts of Rand Mines for the calendar year 1950, showed that profit for the year amounted to £1,112,575 compared with £950,062 in 1949. From the £2,569,579 available, taxation required £32,417 (£131,001). Two dividends totalling 140 per cent (100 per cent) absorbed £752,848 and after transferring £43,077 to forfeited dividend account and £100,000 to exploration reserve, the amount carried forward was £1,640,937, an increase of £227,233.

The Balance Sheet disclosed investment reserves at £4,648,615, an increase over the 1949 figure of £173,109. The book value of the company's investments were recorded at £5,741,178, but their market value, the directors state, is substantially higher.

The report and accounts will be dealt with more fully in next week's issue.

Hongkong Tin's Reduced Output.—The Hongkong Tin Co.'s need to employ its dredge to removing tailings for three months of the year ended September 30, 1950, proved to be a very expensive operation. These three months were virtually non-productive with the result that recovery per cu. yd. declined from 1.35 lb. to 0.49 lb., production costs rose some £98 to £211 17s. 6d. per ton and output of tin ore fell from 930 tons to 424 tons. However, the current year's results have shown very satisfactory results. The dredge has returned to higher grade ground and 203 tons of tin ore were produced in the first six months of the current year ended March 31, 1951, and "sold at a high price."

The profit and loss account for the year ended September 30, 1950, mirrored the effects of the high proportion of tailings treated and showed net profit at £49,287 compared with £168,525 in 1949. The dividend distribution was lowered to 25 per cent against 35 per cent and the forward balance was reduced by £6,269 to £47,438.

Since the end of the financial year the company's war damage claim was assessed at £70,887. An interim payment of 60 per cent amounting to £42,532 was received and set off against the advance of £61,299 received from the Malayan Government towards expenditure on rehabilitation which on September 30 last, amounted to £83,564.

Golden Horse Shoe's High Operating Costs.—Throughout the year to December 31, 1950, Golden Horse Shoe (New) confined its operations to the treatment of Boulder Perseverance No. 2 dump which it works on a profit sharing basis with that

company. From a total of 517,743 tons of tailing treated during the year, 7,721 f.o.z. of gold and 11,753 f.o.z. of silver were recovered, which realized a total of £97,675. Working costs amounting to £83,305 were 56 per cent higher than for the previous year, that is 4s. 0½d. (Australian), against 2s. 7d. (Australian) per ton of tailings treated. The net result was that the joint surplus totalled £14,370 of which the company's share was £7,185. From the £5,281 available a dividend of 2d. per unit of stock was paid, requiring £5,042, leaving a balance of £239, to be carried forward. In view of the high costs experienced during the year the Chairman, Mr. R. Ellerton Binns, declared that unless higher grade areas could be found, operations could not long continue on their present dump, and accordingly preparations are being made to start the treatment of another dump which holds out better prospects for profitable treatment.

Mufulira and Roan Antelope Quarterly Results.—The quarterly reports of Mufulira and Roan Antelope, the Northern Rhodesia Copper producers, cover nine months to March 31. The reports feature the results of the greater outputs, the increase in prices, and the rise in costs which the mines have experienced since devaluation.

	9 mths. ended Mar. 31/51	9 mths. ended Mar. 31/50	Year to June 30/50
Mufulira			
Production, 1.tons	£57,493	£53,561	£76,848
Sales	£9,370,000	£5,647,500	£8,761,000
Operating Surplus	£5,774,000	£3,128,500	£4,957,000
Profit before tax	£5,193,000	£2,700,000	£4,385,000
Roan Antelope			
Production, 1.tons	£53,921	£46,698	£63,557
Sales	£9,316,000	£5,537,000	£7,895,000
Operating Surplus	£5,165,000	£2,334,500	£3,440,000
Profit before tax	£4,400,000	£1,730,000	£2,632,000

It will be seen that the larger outputs and the higher prices overshadow the disadvantages in the rise in costs, and that the estimated profits, before providing for taxation, have already exceeded the corresponding figures for the previous twelve months.

Topical News in Brief

Nickel Deposits Found in Finland.—Nickel deposits which have been found in Ulvsby, near Björneborg, in Finland, are reported to be more extensive than those at Petsamo. The ore is said to contain 1.5 per cent nickel, 1 per cent copper, and traces of gold and platinum.

Haiti Copper Developments.—Extensive deposits of high-grade copper ore are being opened in northern Haiti. Some 30 tonnes of ore have been mined, and geological exploration is being undertaken to determine the exact extent of the deposits before machinery is imported.

Portuguese Government Prohibits Prospecting for Uranium and Thorite.—The Portuguese Government has recently published a law prohibiting the prospecting for uranium and thorite throughout the Portuguese Empire. The law also provides for the annulment of mining claims granted for other minerals where the claim is being worked for radio-active minerals.

New Belgian Congo Iron and Steel Co.—A new iron and steel company has just been formed in the Belgian Congo, named Siderur Congo. It will have a capital of 25,000,000 Congo francs, made up of 25,000 corporate shares. Of this total, 11,991 have been subscribed by the Belgian iron and steel company Ougrée Marihay, 4,000 by the Minière et Métallurgique de Rodange, Luxembourg, and 5,000 by the Mutuelle Mobilière Africaine.

U.S. Firms to Exploit Greek Mineral Deposits.—The Greek Ministry of Industry reports that a number of American firms have submitted proposals for the exploitation of Greek minerals, especially of bauxite and nickel ore. The Minister of Industry, Mr. L. Maccas, had a long conference on the subject with members of the E.C.A. mission to Greece and discussed the possibilities of attracting foreign capital to promote the local metal industry. The E.C.A. is prepared to aid the project by offering scholarships to a number of Greeks for courses in mining and metallurgy.

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THE BRITISH ALUMINIUM CO. INCREASED PROFIT

MR. R. W. COOPER ON THE OUTLOOK

The Annual General Meeting of The British Aluminium Co., Ltd. was held on May 1 in London.

Mr. R. W. Cooper, M.C., the Chairman, in the course of his speech said:

The profit for the year amounted to £1,784,774, which you will observe represents an increase on the figure recorded last year. This increase has been brought about by a general hardening in the demand for our semi-fabricated products which is not solely related to the increases in defence demands.

Much work has been carried out to develop new uses for our metal in many fields since the war and it is regrettable that it will probably be impossible fully to exploit some of these new outlets until the present world shortage of ingot aluminium has been relieved and more stable world conditions restored.

Our production of virgin ingot during the year was slightly less than in the previous year owing to the disturbance caused by the installation of new and larger furnaces at our Reduction Works.

The whole of this production was again sold to the Ministry of Supply, who remain the sole buyers and sellers of virgin aluminium ingot under powers continued by Statutory Order after the war. It has become clear to us that considerable misapprehension exists as to our position in relation to the sale of our output to the Ministry which this Order still makes necessary.

The belief that a Government subsidy has been and is being paid in respect of our ingot production seems to be fairly widespread. At no time, with the exception of the year 1946, has any Government subsidy been paid. In 1946 exceptional conditions prevailed. There were large war-time stocks available, the industry had not become geared to commercial requirements, and there was a considerable fall in the demand for new production of virgin metal.

Canada had vastly expanded her aluminium industry during the war and, with the advantages of very large scale production, new plant, and exceptional depreciation allowances permitted by her Government during the war, entered into a contract with the Ministry at a very low price. As a result, in 1946 the selling price set by the Ministry fell to £67 per ton as compared with £110 per ton during the war, £94 per ton at the outbreak of the war and the present price of £124 per ton.

We had none of the advantages enjoyed by the Canadian producers, and the disadvantage that, for some years it had been impossible to carry out adequate maintenance and re-equipment. It was clearly of the greatest benefit to the semi-fabricating side of the industry that the Ministry's price should be related to the low cost metal then available and that the Government should decide to support the home industry meanwhile.

From 1947 onwards the Ministry has averaged the prices of its various purchases and fixed its selling price at a figure designed to cover the average cost. Any further subsidy has therefore been borne by the semi-fabricating industry and by the same token a large proportion of it by that side of your company's activities.

I am sure that no one would for a moment suggest that any small addition to the price of virgin ingot thus occasioned was of any account in relation to the importance of continuing the production of aluminium in this country.

From 1947 until devaluation in 1949 the effect of the price paid to this company upon the price at which the Ministry has sold to the industry was slightly to increase that price. The increase thus caused was, however, steadily diminishing. From the date of devaluation the price paid to this company has been materially below the Ministry's selling price and has therefore served to decrease the price charged to the semi-fabricating industry.

Throughout the entire period under review the price paid to us has been considerably lower than that at which metal could be obtained anywhere in the world outside North America, and has provided only a meagre return on the large capital employed in the production of virgin metal.

It is our earnest desire, in the interests of development, to keep the price of ingot aluminium at the lowest possible level consistent with a healthy industry. We are, however, seriously handicapped by the steady increase in the cost of every material which we have to purchase, notably coal, coke and transport inland and overseas, which latter makes up such an important part in our total cost of production.

We have not yet been able to conclude a contract with the Ministry of Supply for the purchase of our production for the current year, and our negotiations are hampered by the apparent desire of officials to use the powers referred to, to force us to sell at uneconomic prices, in spite of the fact that the prices at which we are able and willing to sell compare most favourably with those obtainable elsewhere. We do not feel that the Statutory Order in question was drafted with that object in view.

Our Alumina Works at Burntisland and Newport have continued to operate satisfactorily. The reconstruction of our Reduction Works at Kinlochleven has now virtually been completed. Work is still proceeding at Lochaber, but it is not possible at the present time to give any exact date for completion and it is unlikely that benefits will accrue for some little time.

Our Rolling Mills continue to operate satisfactorily and their output has been increased over the previous year. The extensions to our Falkirk Mill, to which I referred last year, are now nearing completion and much of the plant is available for operation. We will not be able to make full use of all our fabricating facilities until the ingot supply position improves. This shortage is not entirely due to physical shortage of ingot but is aggravated by Government stockpiling in various countries. Supplies of ingot for fabricating plants are now the subject of restriction by the Government and this has become the main factor governing the amount of metal which we are able to dispose of from our Rolling Mills. However, the loading of our mill facilities is likely to be heavier than it would be under strictly peacetime conditions with equivalent metal supplies since the rolling of aircraft material to modern specifications requires considerably more plant hours than does the normal run of commercial production.

The price of virgin aluminium, which had remained stable since October, 1949, was increased by the Ministry of Supply from £112 per ton to £120 per ton in October, 1950 and to £124 per ton in January of this year. These increases, and increases in wages and the costs of many materials and of transport, have made it necessary to raise the price of all our products. Nevertheless, aluminium still retains a marked price advantage over other non-ferrous metals, all of which have been subject to greater increases during the period under review. Our metal, in fact, has become so well established, both technically and in regard to price, that by volume rather than weight it is now the second metal in the world after iron and steel.

The shortage of ingot metal has made it necessary for us to ration users of our material, both at home and overseas. Export difficulties have been accentuated by the recent decision to impose export licensing on aluminium products, which is bound to cause delays and difficulties. It is to be hoped, however, that this measure will not be carried to the point where we will lose the value of the overseas connections built-up with much effort and expenditure over many years, since markets once lost often become hard to recover and it is of great importance to the long-term national economy that we should maintain our overseas business to the greatest possible extent.

So far as supplies to our customers are concerned, we of course give first priority to the needs of defence, after which we endeavour to allocate supplies in relation to the importance of the final product in conformity with the voluntary scheme worked out by the industry and approved by the Government. Naturally, we are bending all our efforts towards minimising any inconvenience which may be caused to our customers and it will be a great pleasure to us when we are able once again to supply all their needs in full and to continue and enlarge our efforts towards the further development of our metal into new uses.

I am sure you would welcome some forecast as to the future potentialities of your company. What I have already said will give you a fairly clear indication as to the short term future, namely that although we expect to be hampered to some extent by shortage of raw material we anticipate operating to the full extent of our capacity subject only to that limitation.

In the long term we look forward to a continuation of the steady expansion in the use of aluminium which has been one of the industrial highlights of this century. It is part of our policy, when opportunity again presents itself, to resume our role in the expansion of the production of ingot metal, and not only on the semi-fabricating side to which circumstances outside our control have confined us of recent years.

We recommend a Final Dividend of six per cent on the old Ordinary Stock which, with the four per cent already paid, makes ten per cent less Tax for the year, and in accordance with the terms of issue, a First and Final Dividend of three per cent on the £2,000,000 new Ordinary Stock.

The Report was adopted.

GOLD COAST SELECTION TRUST

The Twenty-fifth Annual General Meeting of Gold Coast Selection Trust, Ltd., was held on April 30 in London.

Major-General W. W. Richards, C.B., C.B.E., M.C., Chairman of the company, in the course of his speech said:

The profit for the first six months of the current year exceeds that for the corresponding period of last year, and the operations of the companies in which we are mainly interested namely, Amalgamated Banket Areas, Ltd., Ariston Gold Mines (1929) Ltd., Bremang Gold Dredging Co., Ltd., Gold Coast Main Reef, Ltd., and Marlu Gold Mining Areas, Ltd., generally show steadily improving results. We can, therefore, expect with some confidence that the dividend we shall recommend, based on this year's results, will be satisfactory.

We paid an interim dividend last year in special circumstances and, in order that too long a time shall not elapse between the payment of that dividend and the next, it will be our endeavour to present our accounts for the year ending September 30 next before the close of this calendar year.

The following is an extract from the Statement of the Chairman, which was circulated with the report and accounts:

The accounts now submitted cover the financial year to September 30, 1950. Briefly summarizing, it will be noted that dividend revenue from our investments aggregated £113,373. Although stock markets showed signs of more general activity, the West African market in which we are interested was, to a large extent, clouded over by the uncertainty of the political future of the Gold Coast Colony. We did, however, show a profit of £28,514 on the transactions effected.

At the annual general meeting held in August last, I announced the declaration of a dividend of 7½ per cent, less tax, in respect of the year to September 30, 1950, and this was paid to members on September 29. I informed members at the meeting that this dividend would be the only payment on account of that period. The dividend potential of the company is reassuring, but as pointed out previously, dividend distributions are obviously restricted to the cash resources available for this and other purposes of the company.

In November last I went to the Gold Coast and visited all the mines in which this company is interested, and it was satisfactory to note the progress being made. Increased costs have partially offset the benefit which was derived in September, 1949, from devaluation.

The report was adopted.

MARLU GOLD MINING AREAS

The Sixteenth Annual General Meeting of Marlu Gold Mining Areas, Ltd., was held on April 30 in London.

Major-General W. W. Richards, C.B., C.B.E., M.C., Chairman of the company, presided.

The following is an extract from the statement of the Chairman which was circulated with the report and accounts for the year ended September 30, 1950.

Some 90,000 tons more ore was put through the mill compared with the previous year, yielding an additional 9,200 oz. of gold; costs showed a reduction of 8d. per ton.

In my review last year I expressed the hope that we would be treating ore at the rate of 50,000 tons per month before the end of last year. These figures were not accomplished, however, due mainly to metallurgical difficulties necessitating modification to the flowsheet in the mill and to shortage of transport. Much has been done to remedy these defects and for the time being we have set a target of 45,000 tons per month from the oxidized zone. I think in the future we can look forward to this being achieved.

The erection of a plant to treat the sulphide ore body is proceeding according to plan, and it is expected that this plant, capable of treating 4,500 tons per month, will be in partial operation by about the end of the year.

The operating profit for the year of £187,570 compared with a loss of £12,045 for the previous year. The debit balance on profit and loss account is now reduced to £27,188. Provided no unforeseen events intervene, and subject to our capital requirements for our proposed underground mining, future profits should place the company in a position to resume dividend payments.

After noting the continuous improvement being shown in the monthly returns, members will have felt a measure of disappointment at the results disclosed in the progress circular for the quarter ended December 31, 1950. I myself was in the Gold Coast visiting the mines during this period and was able to see, first hand, the troublesome effect in the treatment plant of some of the ore. I am afraid such set-backs are inevitable in mining, but I can assure you that everything possible is being done to minimise such occurrences. The manager has stated that he has every reason to believe that we will be able to maintain future production at the anticipated level. This has been achieved for January and February.

The report and accounts were adopted.

AMALGAMATED BANKET AREAS

The Fifteenth Annual General Meeting of Amalgamated Banket Areas, Ltd., was held on April 27 in London.

Major-General W. W. Richards, C.B., C.B.E., M.C., Chairman, in the course of his speech, said:—

I am pleased to report that the current year's operations to date have been even more satisfactory than those for the year under review. We cannot expect to maintain quite such a high average profit for the whole of the year but, our total profit figure for the current year, after all charges and appropriations have been deducted, is likely to be a considerable improvement on last year's results.

It is our intention to recommend a dividend out of the current year's profits, and to initiate a dividend policy which we intend to maintain.

The company is in a fundamentally sound position and we can look forward to a prosperous future.

Great importance is attached to development of underground ore reserves and this will be top priority for the next 3 or 4 years.

The following is an extract from the Statement of the Chairman, which was circulated with the report and accounts for the year ended September 30, 1950.

Production.—The tonnage of ore mined and milled, at 537,690 tons, was greater than that of the previous year's record by 31,151 tons. Similarly, the gold recovery at 79,002 oz. showed an increase of 5,594 oz. The percentage recovery of 95.5 per cent was fractionally lower by 0.2 per cent, but was yet very satisfactory.

After charging depreciation of plant and machinery, and development expenditure written off, aggregating £136,654, there remained a net profit for the year ended September 30, 1950, of £203,402. The final balance to the credit of profit and loss account after further appropriations is reduced to £126,452.

Notwithstanding the total production during the year under review of 537,690 tons, the total ore reserves at the end of the year were greater by 105,184 tons; being computed as follows:

Underground Ore.—2,096,154 tons, averaging 5.541 dwt. per ton over a width of 40.13 in.

Surface Ore.—2,151,195 tons (basal and sub-basal) averaging 2.029 dwt. per ton. 319,041 tons (parting) averaging 0.798 dwt. per ton.

Grand Total.—4,566,390 tons averaging 3.555 dwt. per ton. The report and accounts were adopted.

TRIEFUS & COMPANY

The Fourth Annual General Meeting of Triefus & Co., Ltd. was held on April 30 in London. **Mr. Albert Triefus**, Chairman and Joint Managing Director, presided.

The following is an extract from his circulated statement:

The trading results show a net profit of £140,694, an improvement of some £19,000. The consolidated profit and loss account shows a net profit of £163,148 against £137,605 in the previous year. The directors propose the payment of the fixed dividend on the Preferred Ordinary shares for the half-year to December 31, 1950, plus a further 5 per cent per annum for the year, making a total dividend at the rate of 25 per cent per annum, and also a dividend of 13 per cent on the Ordinary shares.

During 1950 the impact of rearmament upon an existing high level of industrial activity accelerated the demand for industrial diamonds. Orders for the United Kingdom were well maintained, whilst exports to the United States, Canada, Australia, New Zealand, Holland, France, Belgium, and Switzerland showed a definite upward tendency. Sales of cut diamonds in Australia and New Zealand increased considerably. Our export trade now exceeds 80 per cent of the total sales of the company. Sales for the first quarter of the current year show an increase on the 1950 figures for the same period.

The most significant achievement of the works and laboratory branches has been the advance made in the manufacture of diamond drill bits. Diamond drill bits are the tools of the modern mining engineers seeking new deposits of nickel, iron, copper, zinc, lead, and other minerals including coal. Diamonds are thus contributing to the extension of the world's resources of mineral and oil wealth.

Abrasive tools are employed to dress and true grinding wheels in the finishing of precision components and tools. Shaped tools are made from specially polished diamonds and are used in turning, boring, thread grinding, and the precision finishing of non-ferrous metals and plastics. In diamond turning consistent surface finishes can be produced to one or two millionth parts of an inch.

Our laboratory now has sufficient productive capacity to fulfil all foreseeable demands for higher quality diamond powders, the application of which includes the manufacture of diamond dies and diamond laps. Diamond powder is the only economic abrasive for cutting and finishing carbides, jewel bearings, lenses, glass and ceramic products.

The report was adopted.

DISPOSAL of the Complete PLANT of a WEST AFRICAN GOLD MINE

GEORGE COHEN SONS & CO. LTD. have purchased, from the Receiver, for the Debenture Holders, the entire Plant of the ASHANTI ADOWSENA (BANKET) GOLD MINE, situated at NTRONANG, GOLD COAST. Plant can either be sold on site or packed and loaded F.O.B. Takoradi.

A few outstanding items are:—

- A completely equipped **POWER STATION**, 1,300 kW., driven by *Crossley* Vertical Diesel engines.
- Complete **MILLING Plant and MILL BUILDING** by *Fraser & Chalmers*.
- **JAW CRUSHERS.** —
- *Symons* **CONE CRUSHERS.**
- **2 TUBE MILLS** 22' x 5'6" dia.
- **CYANIDE PLANT.**
- **2 Dorr-Oliver FILTERS.**
- Many electrically driven **AIR COMPRESSORS.**
- Complete **PUMPING SETS.**
- **HOISTS.**
- **TUBING.**
- **ELECTRIC MOTORS.**
- Much **TANKAGE.**
- **SURVEY and LABORATORY EQUIPMENT.**

Catalogues, which include details of the many other items of Mining Plant available, are now being prepared.

GEORGE COHEN SONS & CO. LTD

WOOD LANE, LONDON, W.12 • Telephone: *Shepherds Bush 2070*

And at: LEEDS • NEWCASTLE • MANCHESTER • KINGSBURY, Nr. TAMWORTH • SHEFFIELD
GLASGOW • DUNFERMLINE • SOUTHAMPTON • MORRISTON, SWANSEA • BATH • BELFAST



JOHANNESBURG CONSOLIDATED INVESTMENT CO., LTD.

(Incorporated in the Union of South Africa)

MINING COMPANIES' REPORTS FOR QUARTER ENDED MARCH 31, 1951

GENERAL REMARKS.—The revenue from gold has been calculated on the basis of gold at 248s. 3d. per f.o.z. In determining the payable development footage, gold has been taken at 248s. 3d. per f.o.z. The development figures are the actual results of the sampling of development work on reef; no allowance has been made for modifications which may be necessary when computing the ore reserves.

10 & 11, Austin Friars, London, E.C.2.
May 2, 1951.

The East Champ D'Or Gold Mining Co. Ltd.

(Incorporated in the Union of South Africa)

Issued Capital	£250,875		
Crushed 96,000 tons; yielding 13,987 f.o.z. gold.			
	Per ton	gold	
	crushed	produced	
	s. d.	s. d.	
Revenue from Gold	173,617	368 2	
Working Costs	140,818	29 4	201 4
	32,799	6 10	
Sundry Revenue	774		
Profit for Quarter	£33,573		

In addition to the above, £10,353 accrued during the quarter in respect of increased revenue from sales of gold at enhanced prices.

Taxation for the quarter is estimated at £19,202. The Development Footage sampled totalled 820 ft., and gave the following results: Payable, 635 ft., having an average value of 10.7 dwt. over 15 in. Unpayable, 185 ft., having an average value of 2.9 dwt. over 33 in.

Government Gold Mining Areas (Modderfontein)

(Incorporated in the Union of South Africa)

Issued Capital	£1,400,000		
Crushed 665,000 tons; yielding 92,731 f.o.z. gold.			
	Per ton	gold	
	crushed	produced	
	s. d.	s. d.	
Revenue from Gold	1,151,028	34 7	
Working Costs	987,932	29 8	213 1
	163,096	4 11	
Sundry Revenue	17,767		
Profit for Quarter	£180,863		

In addition to the above, £63,361 accrued during the quarter in respect of increased revenue from sales of gold at enhanced prices.

The Government's share of profits for the quarter is estimated at £56,817. The expenditure on Capital Account amounted to £2,615.

The Development Footage sampled totalled 11,440 ft., and gave the following results: Payable, 5,300 ft., having an average value of 5.1 dwt. over 82 in. Unpayable, 6,140 ft., having an average value of 1.7 dwt. over 34 in.

New State Areas Ltd.

(Incorporated in the Union of South Africa)

Issued Capital	£1,514,037		
Crushed 173,000 tons; yielding 23,172 f.o.z. gold.			
	Per ton	gold	
	crushed	produced	
	s. d.	s. d.	
Revenue from Gold	287,620	33 3	
Working Costs	275,986	31 11	238 3
	11,624	1 4	
Sundry Revenue	3,475		
Profit for Quarter	£15,099		

In addition to the above, £19,918 accrued during the quarter in respect of increased revenue from sales of gold at enhanced prices. The Government's share of profits and taxation for the quarter are estimated at £7,150.

The Development Footage sampled totalled 1,097 ft., and gave the following results: Payable, 760 ft., having an average value of 12.6 dwt. over 17 in. Unpayable, 328 ft., having an average value of 3.6 dwt. over 20 in.

The Randfontein Estates Gold Mining Co., Witwatersrand, Ltd.

(Incorporated in the Union of South Africa)

Issued Capital	£4,063,553		
Crushed 855,000 tons; yielding 119,762 f.o.z. gold.			
	Per ton	gold	
	crushed	produced	
	s. d.	s. d.	
Revenue from Gold	1,486,551	31 2	
Working Costs	1,342,864	28 2	224 3
	143,687	3 0	
Sundry Revenue	15,300		
Profit for Quarter	£158,987		

In addition to the above, £83,748 accrued during the quarter in respect of increased revenue from sales of gold at enhanced prices.

Taxation for the quarter is estimated at £70,771. The expenditure on Capital Account amounted to £13,702.

The Development Footage sampled totalled 12,110 ft., and gave the following results: Payable, 3,810 ft., having an average value of 6.3 dwt. over 37 in. Unpayable, 8,300 ft., having an average value of 1.7 dwt. over 40 in.

ANGLO AMERICAN CORPORATION OF SOUTH AFRICA, LIMITED

(Incorporated in the Union of South Africa)

ORDINARY DIVIDEND No. 29

SHARE WARRANT COUPON No. 31

With reference to the notice of declaration of dividend and bonus published in the Press on March 30th, 1951, the following information is published for the guidance of holders of Share Warrants to Bearer:

The DIVIDEND and BONUS on shares represented by SHARE WARRANTS TO BEARER will be PAID on or after May 18, 1951, after surrender of the appropriate coupons at BARCLAYS BANK (DOMINION, COLONIAL & OVERSEAS), Circus Place, London Wall, London, E.C.2, where listing forms may be obtained.

Coupons must be left four clear days for examination and may be presented any day (Saturdays excepted) between the hours of 11 a.m. and 2 p.m.

Coupons may also be presented for payment in French currency at Banque de l'Union Parisienne, 6 & 8, Boulevard Haussmann, Paris 9e, and in this case will be subject to the deduction of the appropriate French Taxes after deduction of South African Non-resident Shareholders' Tax as specified hereunder.

Union of South Africa Non-resident Shareholders' Tax will be deducted at the rate of 6.9 per cent from the dividend and bonus payable in respect of all Share Warrant coupons. United Kingdom Income Tax will also be deducted from Coupons presented for payment at Barclays Bank (D.C. & O.), London, unless Coupons are accompanied by Inland Revenue declarations. Where such deduction is made, the net amount of the dividend and bonus will be 2s. 6.769d. per share, viz.:

	Per share
	s. d.
Amount of Dividend and Bonus declared	4 0
Less: South African Non-Resident Shareholders' Tax at 1s 4.56d. in the £ ...	3.312
	3 8.688
Less: United Kingdom Income Tax at 4s. 9d. in the £ on the Gross amount of the dividend and bonus of 4s. 10.607d.	1 1.919
Net amount	2 6.769

By Order of the Board,

W. E. GROVES, London Secretary.

London Office:

11, Old Jewry, E.C.2.

May 3, 1951.

NOTE.—The Corporation has been requested by the Commissioners of Inland Revenue to state:

Under the provisions of Section 36 and the Sixth Schedule of the Finance Act, 1950, relating to "unilateral relief" from double taxation, South African tax applicable to the dividend is allowable as a credit against the United Kingdom tax payable in respect of the dividend. The deduction of tax at the reduced rate of 4s. 9d. in the £ instead of at the standard rate of 9s. 6d. in the £ represents a **provisional** allowance of credit at the rate of 4s. 9d. in the £. The final rate of credit allowable to a particular shareholder depends on his personal rate of tax; it may be more or less than 4s. 9d. in the £ but must not exceed 3/4th of the personal rate. Revision of the credit involves a corresponding adjustment of the amount shown above as the gross amount of the dividend for United Kingdom tax purposes.

W. E. SINCLAIR, M.I.M.M.
Consulting Mining Engineer
South & East Africa & Rhodesia
P.O. Box 1183. JOHANNESBURG

SURVEYOR, experienced, required for West African Mining Property. Write full particulars, stating age and qualifications to Box 269, c/o Dawson's, 129, Cannon Street, E.C.4.

MINING ENGINEER required for West African Property with experience of opencast and underground operations. Write full particulars, stating age, and qualifications to Box 271 c/o Dawson's, 129, Cannon Street, E.C.4.

MINE MANAGER required for West African Property, thoroughly experienced in opencast and underground operations, ore dressing and concentrating. Write full particulars, stating age, and qualifications to Box 272, c/o Dawson's, 129, Cannon Street, E.C.4.

INVESTIGATIONS & MANAGEMENT LTD.,
Technical Consultants to
**THE NANWA GOLD MINES LTD, SILVERMINES
LEAD & ZINC CO., LTD.**

and other mining companies, are continually requiring mining staff of all grades. Apply to Secretary, Finsbury House, Blomfield Street, London, E.C.2, giving record of service, references, etc.

**WIGAN AND DISTRICT MINING AND TECHNICAL
COLLEGE**

The Governing Body invites applications for a post as **LECTURER IN THE DEPARTMENT OF MINING AND GEOLOGY**. Duties will commence as from September 1, 1951 as soon as possible thereafter.

Candidates should hold a degree in Mining. A Statutory Mine Surveyor's Certificate and/or a First Class Mine Manager's Certificate would be regarded as additional qualifications. Teaching experience is desirable but not essential. Salary in accordance with the Burnham Technical Scale for Lecturers (£900-£1,000) or Senior Lecturers (£1,000-£1,150) according to qualifications and experience.

Further particulars and application form will be sent by the undersigned on receipt of a stamped addressed foolscap envelope. Last date for receipt of applications: Tuesday, May 22, 1951. Applications not on the form provided will be disregarded.

April 26, 1951. E. C. SMITH (Principal).

DIVIDENDS

British Borneo Petroleum 1s.
Broken Hill South 3s. *i* (June 15)
Central Mining and Investment 1s. 9d.
Central Provinces Manganese Ore 2s. 6d. *
Imperial Chemical Industries 9%
Kent (F.M.S.) Tin 25% *i* (May 16)
Lake View Investment 10% (June 27)
Mufurira Copper Mines 5s. *i* (May 3)
Noranda Mines \$1 *i*
North Broken Hill 3s. 6d. *i* (June 26)
Rhodesian Anglo American 10% *i* (May 11)
Rhodesian Selection Trust 1s. 6d. *i* (June 4)
Rhokana Corporation 50% *i*
Roan Antelope Copper 1s. *i* (June 25)
Taiping Consolidated 20% *i*
Tharsis Sulphur and Copper 10%
i interim * Tax free

RHODESIAN ANGLO AMERICAN LTD.

The Directors of Rhodesian Anglo American Ltd. have today declared an Interim Dividend in respect of the financial year to June 30, 1951, of 10 per cent equivalent to 1s. per 10s. unit of Stock.

Dividend Warrants will be posted as soon as possible to members registered at close of business on May 11, 1951.

A further announcement will be made advising date of payment which cannot be fixed until the rate of tax deductible from dividends payable to members whose registered addresses are in the United Kingdom has been determined.

As this dividend is payable partly out of profits earned before January 1, 1951, on which date the company transferred its seat of management and control to Northern Rhodesia, one half of it will be regarded as a free of tax dividend for United Kingdom tax purposes. It is emphasized that this favourable tax arrangement will apply only to dividends payable out of the current year's profits. United Kingdom tax at a reduced rate to allow for unilateral relief will be deductible from the remaining half of the dividend. No Northern Rhodesian tax will be deducted from this dividend.

Dividends payable to members whose registered addresses are elsewhere than in the United Kingdom, will be paid entirely without deduction of tax.

The Transfer Registers in London and Johannesburg will be closed from May 12 to the 18th, 1951, inclusive.

For and on behalf of

ANGLO AMERICAN CORPORATION OF SOUTH AFRICA,
LIMITED.

Registrars and Transfer Agents in England

G. E. SIMMONDS.
Assistant London Secretary.

11, Old Jewry,
London, E.C.2.
April 26, 1951.

Merchants and Exporters

WOLVERHAMPTON

DIAMOND OIL & TOOL CO. LTD.

ALL KINDS OF
**BOATS AND INDUSTRIAL
DIAMONDS**

11 HATTON GARDEN
LONDON E.C.1

TELEPHONE : HOLBORN 3017 CABLES : PARADIMON LONDON

ANGLO-TRANSVAAL CONSOLIDATED INVESTMENT CO. LIMITED

Mining Companies' Directors' Reports for Quarter ended 31st March, 1951

PRODUCTION		Per ton crushed	
Tons crushed: 522,000 yielding 84,803 ounces fine.			
Revenue from Gold	£ 1,055,220	s. 40	d. 5
Working Costs	803,476	30	9 (189s. 6d. per oz. fine)
	251,744	9	8
Sundry Revenue...	12,500		5
Working Profit for the Quarter	264,244	10	1

Working Costs per ton: 30s. 9d. include 4s. 7d. per ton in respect of Development Expenditure.

In addition to the above revenue, £59,095 accrued in respect of increased revenue from the sales of gold at higher than standard prices, sold for manufacturing purposes during the three months, January to March, 1951, inclusive.

The Working Profit for the Quarter, as shown above, does not take into consideration the amount estimated at £120,000 for the Quarter, payable to the Government in taxation and as its share of profits in terms of the Mining Lease.

CAPITAL EXPENDITURE

The Expenditure on Capital Account for the Quarter amounted to £71,140.

SHAFT SINKING

No. 11A SUBVERTICAL SHAFT was sunk 213 feet for the Quarter to a total depth of 1,982 feet. In addition, 216 cubic feet of station cutting were excavated on the 32nd Level, and 11,664 cubic feet of station cutting were excavated on the 33rd Level. The shaft was concrete-lined to a depth of 1,954 feet, of which 228 feet were accomplished during the Quarter.

No. 2 KIMBERLEY REEF INCLINE SHAFT is being advanced by winzing from surface, and rising from the 2nd and 4th Levels. A total of 15 feet have been winzed; and 755 feet risen, of which 15 feet of winzing and 161 feet of rising were accomplished during the quarter.

DEVELOPMENT

MAIN REEF SERIES—14,182 feet of development and shaft sinking were accomplished, of which 6,780 feet were sampled, showing 5,430 feet, equal to 80 per cent, as payable, at an average value of 14.52 dwts., over a reef width of 17.6 inches, equivalent to 255 inch-dwts. Payable Reef disclosures were distributed as follows:—

SOUTH REEF—Of 655 feet sampled, 450 feet, equal to 69 per cent, were payable, at an average value of 21.54 dwts., over an average reef width of 8.1 inches, equivalent to 174 inch-dwts.

MAIN REEF LEADER—Of 4,300 feet sampled, 3,595 feet, equal to 84 per cent, were payable, at an average value of 17.70 dwts. over an average reef width of 15.5 inches, equivalent to 275 inch-dwts.

MAIN REEF—Of 1,825 feet sampled, 1,385 feet, equal to 76 per cent, were payable, at an average value of 8.86 dwts., over an average reef width of 25.9 inches, equivalent to 230 inch-dwts.

BIRD AND KIMBERLEY REEFS—In addition to the above footage on Main Reef Series, 767 feet were advanced on Bird Reef and 3,526 feet on Kimberley Reef. Payable Reef disclosures were as follows:—

BIRD REEF—Of 705 feet sampled, 310 feet, equal to 44 per cent, were payable, at an average value of 3.61 dwts., over an average reef width of 45.8 inches, equivalent to 166 inch-dwts.

KIMBERLEY REEF—Of 2,145 feet sampled, 845 feet, equal to 39 per cent, were payable, at an average value of 3.04 dwts. over an average width of 67.1 inches, equivalent to 204 inch-dwts.

(The above results are based on actual sampling. No allowance has been made for adjustments necessary in the valuation of the corresponding Ore Reserve.)

VILLAGE MAIN REEF GOLD MINING COMPANY (1934) LIMITED

PRODUCTION

Tons treated: 104,200 (including 5,400 tons from accumulated sands) yielding 15,821 ounces fine.

		Per ton treated	
		s.	d.
Revenue from Gold	£ 196,846	37	9
Working Costs	139,312	26	9 (176s. 1d. per oz. fine)
Working Profit for Quarter	57,534	11	0

Working Costs per ton, 26s. 9d. include 4s. 11d. per ton in respect of Development Expenditure.

In addition to the above revenue, £9,330 accrued in respect of increased revenue from the sales of gold at higher than standard prices for manufacturing purposes for the three months January to March, 1951.

The Working Profit for the Quarter, as shown above, does not take into consideration interest on loans, amounting to £493 for the Quarter, nor the further amount, payable to the Government in respect of Mining Taxation, estimated at £30,500 for the Quarter.

CAPITAL EXPENDITURE

The Expenditure on Capital Account for the Quarter amounted to £1,189.

DEVELOPMENT

7,477 feet of development were advanced during the Quarter, and a total of 3,701 feet of old drives and crosscuts were reconditioned. In addition, 222 feet of underground diamond drilling was done as an aid to development.

NEW KLERKSDORP GOLD ESTATES, LIMITED

Tons milled—24,790 yielding 2,953.19 ounces fine.

Revenue from Gold	£36,657
Working Costs	33,723
	£2,934
Sundry Revenue...	684
Working Profit for Quarter	£3,618
Working Costs per ton milled	27s. 2d.
Working Costs per ounces fine recovered	228s. 5d.

In addition to the above revenue, £1,314 accrued in respect of increased revenue from the sales of gold at higher than standard prices, sold for manufacturing purposes during the months January to March, 1951.

The Working Profit for the Quarter, as shown above, does not take into consideration interest on loan, amounting to £751 for the Quarter.

No liability was incurred in the form of Mining Taxation payable to the Government in respect of the profits earned for the Quarter.

CAPITAL EXPENDITURE

The expenditure on Capital Account for the Quarter ended 31st March, 1951, amounted to £3,638.

DEVELOPMENT

The total footage advanced during the Quarter amounted to 1,000 feet. Of 930 feet sampled, 480 feet, equal to 51.6 per cent, proved payable, at an average value of 3.79 dwts., over an estimated stopping width of 40.1 inches, equivalent to 152 inch-dwts.

MIDDLE WITWATERSRAND (WESTERN AREAS), LIMITED

INTERESTS IN THE ORANGE FREE STATE

MINERAL RIGHTS—Your Company's interests in the Orange Free State consist of Mineral Rights purchased over 12,099 morgen in the Virginia Area; the entire farm Van den Heeverstrust No. 419, measuring 629 morgen, situate North-West of Odendaalsrus, and over a one-half undivided share of the farm Remaining Extent Wesselsgunst No. 261, measuring 58 morgen 1½ square roods, situate immediately North of the Freddie's North Lease Area, Limited.

Your Company retains its interest in Option Contracts over 567 morgen immediately North-West of Odendaalsrus, in Option Contracts over 1,175 morgen in the Winburg District, and a participation in subscription rights accruing to Lydenburg Estates, Limited, in respect of certain of that Company's interests in the Orange Free State.

SURFACE RIGHTS—The total area of Surface Rights held by your Company in the Virginia Area and in the area North-West of Odendaalsrus is 5,136 morgen. Your company holds options to purchase the Surface Rights over a further 600 morgen in the Virginia Area.

INTERESTS IN THE KLERKSDORP DISTRICT OF THE TRANSVAAL

During the Quarter your Company exercised an option acquired from the Anglo-Transvaal Consolidated Investment Company, Limited, to purchase the Mineral Rights of the Eastern Portion of the Klerksdorp Townlands, measuring 4,556.6511 morgen, and also purchased a 62.63rd share of the Mineral Rights of a portion of the farm Elandsheuvell No. 54, district Klerksdorp, measuring 254 morgen 375 square roods.

REPORT FOR QUARTER ENDED 31st MARCH, 1951

A total of 4,182 feet was drilled in 4 boreholes.

Borehole No.	Drilled on joint account with	Farm	Depth at 31st March, 1951	Formations traversed during Quarter		Reefs intersected					Remarks	
				Borehole Depths (feet)		Description	Reef	Depth feet	Value dwts.	Cor-rected width inches		Inch-dwts.
				From	To							
VDH. 4a/50	General Exploration Orange Free State, Limited	Van den Heeverstrust No. 419, District Odendaalsrus	6,157 Borehole completed on 1st March, 1951 Deflection in progress	5,072	5,422	Ventersdorp Sediments	"A"	5,478	0.87	34.8	23	Incomplete Core recovery
				5,422	6,065	Witwatersrand Sediments	"B"	5,540	0.92	49.3	45	Complete Core recovery
				6,065	6,139	Witwatersrand Intrusive	Leader	5,938	0.18	50.9	9	Complete Core recovery
				6,139	6,157	Witwatersrand Sediments	Basal	6,037	3.03	25.4	77	Incomplete Core recovery
							Basal	6,049	33.25	13.2	439	1st Fault Duplication—Incomplete Core recovery
							Basal	8,140	14.16	9.4	133	2nd Fault Duplication—Incomplete Core recovery
VDH. 5/51	General Exploration Orange Free State, Limited	Van den Heeverstrust No. 419, District Odendaalsrus	1,381	0 595	585 1,381	Karoo System Ventersdorp Lava						
VDH. 6/51	General Exploration Orange Free State, Limited	Van den Heeverstrust No. 419, District Odendaalsrus	751	0 650	650 751	Karoo System Ventersdorp Lava						
TL 29		Klerksdorp Townlands No. 44, District Klerksdorp	730	0 142 177	142 177 730	Dolomite Series Black Reef Series Ventersdorp Lava						

In addition, the Company is participating in the drilling of the following boreholes in the Orange Free State:—

Borehole Number	Farm	Drilled by
RD.1	Rosedale No. 898, District Odendaalsrus	General Exploration Orange Free State, Limited
LR.6	La Riviera No. 289 (Portion 4), District Ventersburg	New Consolidated, Free State Exploration Company, Limited
LR.7	La Riviera No. 289 (Portion 2), District Ventersburg	New Consolidated, Free State Exploration Company Limited
WN.5	Weltevreden No. 205, District Odendaalsrus	General Exploration Orange Free State, Limited
TV.3	Tevrede of Spes Bona No. 921, District Odendaalsrus	General Exploration Orange Free State, Limited

DRILLING IN THE STILFONTEIN-HARTEBEESTFONTEIN AREA

During the Quarter ended 31st March, 1951, a total of 18,877 feet was drilled on joint account with Strathmore Development Company, Limited, in the following ten boreholes:—HB.13, HB.18, HB.19, HB.20, BU.2, BU.3, BU.4, BU.5, W1.1, W1.2.

ANGLO TRANSVAAL COLLIERIES, LIMITED

The Sales Output of the Subsidiary Collieries controlled by this Company for the Quarter ended 31st March, 1951, totalled 259,668 tons.

VIRGINIA ORANGE FREE STATE GOLD MINING COMPANY, LIMITED

SHAFT SINKING

No. 1 VERTICAL SHAFT was sunk 341 feet during the Quarter to a total depth of 2,194 feet. At a depth of 1,898 feet the shaft passed from the Ventersdorp Lava into the Ventersdorp Sediments. In addition a pump-station at a depth of 1,892 feet was excavated and equipped during the Quarter. The shaft was concrete-lined to a depth of 2,154 feet, of which 307 feet was accomplished during the Quarter.

No. 2 VERTICAL SHAFT was sunk 506 feet during the Quarter to a total depth of 2,254 feet. The formation traversed during the Quarter was Ventersdorp Sediments. In addition a pump-chamber at a depth of 1,892 feet was excavated and equipped during the Quarter. The shaft was concrete-lined to a depth of 2,191 feet, of which 545 feet was accomplished during the Quarter.

No. 3 VERTICAL SHAFT—Full scale sinking operations commenced on the 27th February, 1951. During the Quarter this shaft was sunk 489 feet to a total depth of 550 feet, of which 470 feet was accomplished in the month of March. The footage sunk during March, 1951, constitutes a world shaft sinking record. At a depth of 525 feet the shaft passed from Karroo Shales and Sandstones into a Dolerite dyke. The shaft was concrete-lined to a depth of 530 feet, of which 470 feet was accomplished during the Quarter.

The intersection of water-bearing fissures, requiring cementation considerably delayed shaft sinking operations during the Quarter at No. 1 and No. 2 Shafts. Very little delay was caused by water-bearing fissures at No. 3 Shaft.

SHAFT SINKING EQUIPMENT

No. 3 SHAFT—A 450 H.P. Hoist, the Stage Hoist and a 200 H.P. Fulton Hoist were commissioned during the Quarter and work is proceeding on the installation of a 450 H.P. Steam Hoist.

HOUSING AND AMENITIES FOR EUROPEAN EMPLOYEES

At the end of the Quarter, 85 houses in the permanent quarters were completed and occupied. In addition 18 houses were under construction and the existing single quarters are being converted into two-roomed flats. Work is progressing on the building of two blocks of single quarters to replace the existing single quarters. 26 Temporary houses at No. 3 Shaft have been occupied.

74 Persons are accommodated in the permanent single quarters and 192 persons, including contractors, in the temporary camp. A number of employees of the Merriespruit Mine are accommodated at Virginia.

Work is proceeding on the lay-out of sports fields, and on the construction of a swimming bath.

NATIVE COMPOUNDS

At the end of the Quarter, 1,356 Natives were housed in the permanent compounds, and building work on extensions is proceeding. In addition, 544 Natives are accommodated at temporary compounds, of which 60 are employees of the Merriespruit Mine and 140 employees of Contractors. The permanent kitchens at Nos. 2 and 3 Compounds have been commissioned.

WATER SUPPLY

An adequate supply of clear water is being obtained from boreholes sunk on the property and work is progressing on a prefabricated concrete reservoir in the residential area. Water from the Sand River pumping plant was reticulated to No. 3 Shaft during the Quarter.

POWER SUPPLY

Electrical and compressed air supplies functioned satisfactorily during the Quarter. The 10-inch compressed air line to No. 3 Shaft and a second 1,000 H.P. Compressor have been commissioned.

STONE CRUSHER PLANT

The extensions to the Crusher Plant have been completed and 10,500 cubic yards of crushed stone for concrete making were produced during the Quarter, from rock hoisted at No. 1 Shaft. A proportion of the output is being supplied to the Merriespruit Mine for concrete work and a stock pile has been accumulated.

GENERAL

The bridge over the Sand River, providing direct road communication from No. 1 Shaft to No. 2 and No. 3 Shafts, has been completed and is in use. Part of the road between No. 1 and No. 2 Shaft is being macadamised.

LABOUR

The Labour strength at the end of the Quarter was: Europeans, 244; Natives, 1,666.

CAPITAL EXPENDITURE

Capital Expenditure, amounting to £419,956, was incurred during the Quarter on shaft sinking, buildings and plant.

The total Capital Expenditure incurred up to 31st March, 1951, amounted to £2,239,042.

Refunds of £345,914 have been received from Merriespruit (O.F.S.) Gold Mining Company, Limited, in respect of their proportion of Joint Capital Expenditure incurred since commencement of operations.

MERRIESPRUIT (ORANGE FREE STATE) GOLD MINING COMPANY, LIMITED

SHAFT SINKING

No. 1 VERTICAL SHAFT was sunk 690 feet during the Quarter to a total depth of 1,083 feet. The shaft passed from Karroo Shale into a Dolerite Sill at a depth of 1,078 feet, having previously passed through a Dolerite Sill between 900 feet and 988 feet. A pump station at a depth of 913 feet was completely excavated and equipped during the Quarter. The shaft was concrete-lined to a depth of 1,067 feet, of which 699 feet were advanced during the Quarter.

The intersection of water-bearing fissures, requiring cementation, delayed shaft sinking operations during the Quarter.

No. 2 VERTICAL SHAFT—No sinking work was done during the Quarter, the shaft depth remaining 97 feet, of which 94 feet is concrete-lined.

SHAFT SINKING EQUIPMENT

No. 1 SHAFT—The two 125 H.P. single drum temporary hoists were replaced by a 750 H.P. Fulton double drum hoist.

WATER SUPPLY

An adequate supply of water is being obtained from boreholes sunk on the property.

POWER SUPPLY

The Electrical and Compressed Air supplies functioned satisfactorily during the Quarter. The 16-inch Compressed Air Column from the Main Compressor station at No. 1 Shaft, Virginia, was completed in January, 1951.

LABOUR AND HOUSING

The Labour strength at the end of the Quarter was: Europeans 72. Natives 545. Work is progressing on the construction of the permanent Compound rooms and kitchens, and at the end of the Quarter 510 natives were housed. A further 60 Natives were housed at the Virginia No. 1 Temporary Compound.

CAPITAL EXPENDITURE

Capital Expenditure, amounting to £232,531, was incurred during the Quarter. The total Capital Expenditure incurred up to 31st March, 1951, amounted to £1,429,211. Included in the total Capital Expenditure is an amount of £345,914 refunded to Virginia O.F.S. Gold Mining Company, Limited, in respect of this Company's proportion of joint Capital Expenditure incurred to date.

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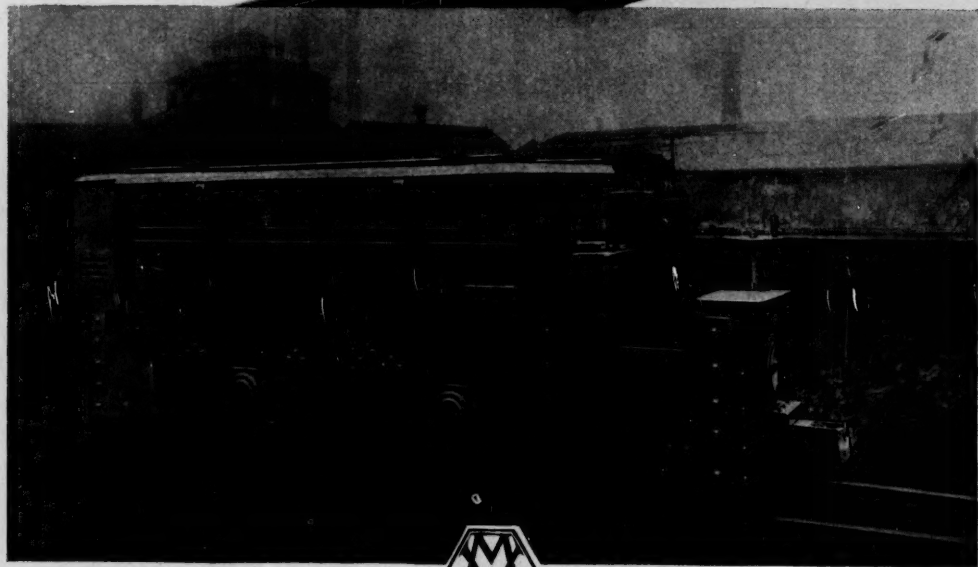
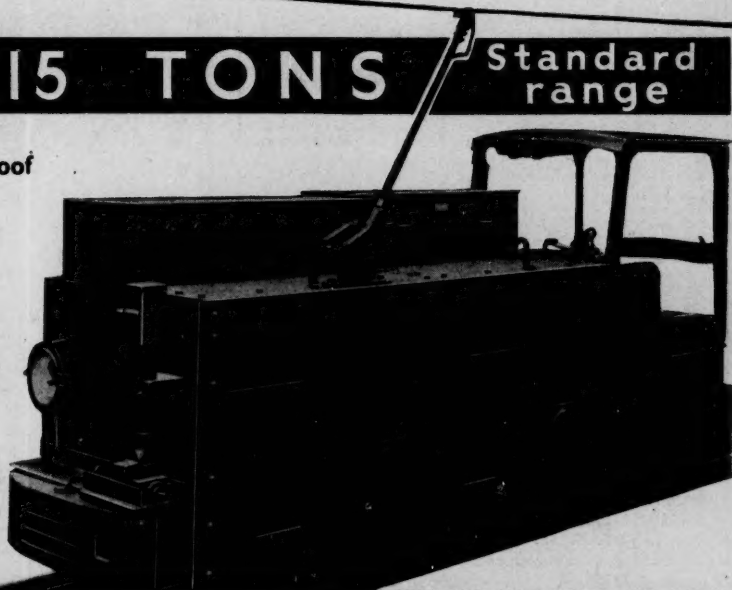
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